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# "Realizing Transitions: Common Core, College, Career": Selected Proceedings of the 2013 Michigan Teachers of English to Speakers of Other Languages Conference

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**“Realizing Transitions:  
Common Core, College, Career”**

**Selected Proceedings of the 2013  
Michigan Teachers of English to  
Speakers of Other Languages  
Conference**

**October 4 & 5, 2013**

**Editors**

Marian Woyciehowicz Gonsior

Alyce Howarth

**EMU Digital Commons Liaison**

James Perren

2014

*Realizing Transitions: Common Core, College, Career*

Selected Proceedings of the  
Michigan Teachers of English to Speakers of Other Languages Conference

Kellogg Hotel and Conference Center, Michigan State University  
E. Lansing, Michigan October 4 – 5

Editors:  
Marian Woyciehowicz Gonsior & Alyce Howarth  
EMU Digital Commons Liaison: James Perren

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# The Selected Proceedings of the 2013 MITESOL Conference

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# The Selected Proceedings of the 2013 MITESOL Conference

## Preface

**This** volume in the “Selected Proceedings” series is a compilation of just a few of the more than sixty papers, workshops, teaching demonstrations and other presentations that made up the 2013 Michigan Teachers of English to Speakers of Other Languages (MITESOL) conference. On October 4-5 members and other MITESOL supporters met at the Kellogg Hotel and Conference Center on the beautiful campus of Michigan State University in E. Lansing for the annual conference. Organized under the leadership of Jeanine Clever, President-Elect and Conference Chair, and Rick Rojas, Conference Co-Chair, the conference focused on the theme “Realizing Transitions: Common Core, College, Career.” To highlight the theme, several sessions concerning the state-wide implementation of the new Common Core State Standards (CCSS) and the World-Class Instructional Design and Assessment (WIDA) Standards were featured. Attendees also enjoyed the usual MITESOL conference ingredients: There were special invited speakers, breakout sessions, exhibitor displays, Special Interest Group (SIG) meetings, a Friday evening reception, and a Saturday luncheon and business meeting. More than 325 people took part in this opportunity to gather for professional development and networking along the autumn-tinged banks of E. Lansing’s Red Cedar River, just visible outside the Kellogg Center’s windows.

Perhaps most memorable were presentations by the two invited speakers. On Friday evening, speaker Dr. Randi Reppen (Northern Arizona University) delivered a keynote entitled, “It’s Elementary: A Look at Academic Language from Elementary School to University,” which explored the complicated factors that influence the learning of the language favored in academic contexts. Saturday’s Plenary was presented by Dr. Catherine H. Reischl (University of Michigan, Ann Arbor). In her talk, entitled “Getting Reinvigorated: Using Curricular Changes to Renew Your Teaching Practice,” she asked us to view curricular changes as opportunities to reimagine our teaching practices.

*Realizing Transitions: Common Core, College, Career*, Volume 8 in the “Selected Proceedings” series, contains six articles that attest to the quality of the presenters and the presentations heard by attendees at the conference. For the convenience of our readers, these articles are divided into three sections: 1) Plenary Presentation, 2) Issues in TESOL, and 3) Teaching Techniques and Materials Development. While these are the traditional divisions set for this publication, each article can inform and provide inspiration for the teaching of English as a Second Language (ESL) at every level and in any context -- K-12 through university or out in the community, much as the conference theme implied.

The first article in the collection is Reischl’s Plenary presentation “Getting Reinvigorated: Using Curricular Changes to Renew Your Teaching Practice.” In it, Reischl uses Marge Piercy’s poem “To be of Use” to initiate a discussion of how teachers are called “to be of use” to their students by creating and doing “work that is real.” She describes the innovative summer program she and other teachers, university professors, and teaching interns created to teach third- through eighth-grade English language learners (ELLs) in Ann Arbor over the past four years. The program is a wonderful example of how teachers can comply with changing standards while providing meaningful instruction. Reischl is Clinical

Associate Professor of Education in the School of Education at the University of Michigan, Ann Arbor.

In the following section, *Issues in TESOL*, readers will find four diverse papers, each focused on a different issue of concern to those in the field. In “Bridging Home and School: Using ELL Funds of Knowledge to Enrich English Language Arts Teaching,” the first selection in this section, Dawn Evans, Assistant Professor of English at Grand Valley State University, writes about how to bridge the gap between the language and culture of home and the classroom, with particular reference to “funds of knowledge” pedagogy. The funds of knowledge approach, most often associated with Moll and his co-researchers (see, for example, Moll & Greenberg [1990]), is based on the validation of the cultural gifts that students bring to the classroom. These will often remain invisible without a concerted effort from teachers to get to know more about their students’ families and home environments. Evans, who is Canadian, explores the literature on funds of knowledge and offers examples from her own experience working with students of Tahltan First Nations ancestry in British Columbia.

Kristin Homuth and Allison Piippo’s “Using American Culture as a Context for English Language Learning.” is next in this section. Drawing on their own experiences abroad, where the importance of knowing culture as well as a language became quite apparent, Homuth and Piippo enter the debate about the place of culture in the ESL classroom. They demonstrate how culture can become an integral part of each lesson, using examples from their own teaching. Homuth and Piippo have contributed to previous volumes of the “Selected Proceedings” series. In addition, Piippo’s name is probably familiar to most MOTESOL members as she has served as co-editor of previous volumes of the *Proceedings* and is currently the co-editor of MOTESOL’s bi-annual newsletter. Both authors work in higher education: Homuth is Curriculum Administrator and Instructor at Language Center International in Southfield, Michigan, and Piippo is an ESL lecturer at Eastern Michigan University.

In the next paper, “Extensive Reading and Vocabulary Acquisition: How and Why EFL Countries Should Adopt this Practice,” Tamanna Mostafa presents a detailed summary of research on the issue of extensive reading. Drawing on her own experience as an English language professional in her native Bangladesh, along with data from multiple research studies, Mostafa stresses the importance of extensive reading. She explains how it can be implemented in any classroom, even in an English as a foreign language (EFL) setting, where money, space and/or cultural roadblocks might be obstacles. After coming to the United States in 2010, Mostafa taught at Michigan State University and Central Michigan University.

Christine M. Pearson’s “‘Food for Thought’ When Working with Those ‘Hungry for Success’” rounds out this section. Pearson’s paper explores the issue of how lack of healthy food affects our students’ performance in the classroom. After establishing why English language learners, in particular, may be affected by poor nutrition, Pearson gives a short “tutorial” on how the brain functions, a review of research focusing on the effects of important micronutrients on brain functions, and ends with specific suggestions for teachers interested in combatting this problem in their schools. Pearson served as editor of several previous volumes of the *Proceedings*.

While the articles already mentioned focus on issues we might all experience in the classroom, they also offer a variety of solutions for these same issues. Focusing more on the

solution to another issue in TESOL – vocabulary teaching – is Patrick T. Randolph, whose paper “Breaking the Ebbinghaus Curse for Vocabulary Acquisition with the R.E.S.T. Method” completes this volume in the “Teaching Techniques and Materials Development” section. Randolph’s original presentation at the 2013 conference received the most participant votes for best presentation and was nominated for the honor of being one of only eight presentations chosen to represent TESOL International's "Best of the Affiliates" at the 2015 TESOL conference in Toronto, Ontario, Canada. In his paper Randolph, Faculty Specialist at Western Michigan University, looks at the problem of how to facilitate memory and usage of new vocabulary words by ESL students. He gives a detailed explanation of his R.E.S.T. method and explains how the technique was enthusiastically embraced by his students. Randolph recently co-authored *Cat got your tongue?: Recent research and classroom practices for teaching idioms to English learners around the world*, published by TESOL Press.

Working as a mentor editor with this group of authors was an amazing experience. They were patient, generous, and kind and wonderful to work with. As the new lead editor of the *Proceedings*, there was a lot to learn. First and foremost, I have to thank the contributors for their involvement in this publication. While I worked with each of them as a mentor editor, they are the authors of the work presented. They retain the copyright on their work and should be contacted with questions about their articles or requests for permission to reprint.

In addition, I would like to acknowledge my co-editor Alyce Howarth for her help reading and commenting on all the original submissions. Despite being on sabbatical in southern Turkey, she was able to provide a great start to the project. It was quite interesting working so closely with someone across so many time zones.

It is my hope that readers will find inspiration among these pages and plan on submitting their own manuscripts to future conferences and volumes in this series. I look forward to seeing what the MITESOL 2014 at Grand Valley State University, Grand Rapids campus, brings.

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## **Getting Reinvigorated: Using Curricular Changes to Renew Your ESL Teaching Practice**

Catherine H. Reischl  
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### **Abstract**

This keynote address discusses the impact of the Common Core State Standards (CCSS) on the teaching of English language learners (ELLs) and offers images of the possible as we look at ways that this initiative might reshape the roles of English as a Second Language (ESL) teachers and reinvigorate our teaching practices. The address describes an ESL project-based, multi-genre, informational writing unit, designed by Ann Arbor Public Schools ESL teachers, University of Michigan-Ann Arbor professors, and teaching interns, taught in a summer program for third- through eighth-grade ELLs. It offers a practical example of how to draw on the CCSS to design purposeful instruction that frames ELLs as people who are, at their core, learners of content who are also adding a new language. The author cautions about the political and practical challenges of the CCSS, but urges teachers to examine the content and possibilities in the standards themselves.

I'm delighted to have this opportunity to speak with MITESOL members and friends today. I first got to know many of you more than 25 years ago — at a time when we hadn't sent an e-mail yet, when we were still pretty excited about using a microwave, and when our skin fit a little better. The field of ESL has transitioned in many ways during these 25 years — and when Jeanine Clever called about the MITESOL conference and asked me to talk about the transition to the Common Core, this seemed like a timely conversation for us to have together. For many years, as a faculty member in the School of Education at the University of Michigan-Ann Arbor, I've been teaching beginning teacher education students — we call them “interns” — in our Master of Arts with Elementary Certification program, a program where students can earn both their elementary teacher certification and the ESL endorsement in a 14 month, intensive, field-based program. My work focuses on creating contexts where beginning teachers learn to teach literacy and English as a second language to kindergarten through eighth-grade students.

Drawing on this work, I'd like to talk with you today about the transition to the Common Core State Standards (CCSS) that this state and most other states are undertaking in this country, and what I think this could mean for teachers of English language learners (ELLs). Specifically, what possibilities do Common Core Standards open up for us as teachers? I'll do this by sharing my ideas, the ideas of a few tried and true educators whose work has heavily influenced my own, and also by sharing images and stories of practices that ESL teachers and U of M faculty have been designing and teaching in a summer ESL program for fourth- through eighth-grade ESL students in Ann Arbor. We'll focus on teaching informational writing as a particularly rich context of instruction for ELLs that can be well supported by the CCSS. A recent TESOL report, summarizing the thinking of 30 ESL teachers, administrators, education experts and researchers in Maryland and the District of Columbia and published in 2013, examined the role of ESL teachers in implementing the

Common Core. The report emphasizes that in order for ELLs to meet the rigorous standards of the CCSS, *all* teachers, both teachers of content and teachers of language, will need to routinely identify and teach to academic language and content that will make it possible for ELLs' success. Further, ESL teachers will need to serve as resources for our classroom colleagues, particularly in regard to content area literacy and the CCSS language standards, as we learn together how to do this ambitious, language-rich work. As the report states, we will need to play out the roles of experts, advocates, and consultants as we collaboratively revise the curriculum. It sounds like a lot of work—but work that has the potential to reinvigorate our own teaching as well.

To get started, I'd like to share a few lines of poetry with you from a poem written by one of my favorite writers, Marge Piercy, who is a Detroit native who, long ago, was the first in her family to graduate from a university and, coincidentally, that university was the University of Michigan. I share these lines of this poem with you because, as I talk with you about my own beliefs and practices about teaching, I'd first like to honor you and the challenging work you do as teachers of English language learners. Marge Piercy, while not a teacher, seems to know what the work of ESL teaching is all about. Her poem "To be of Use" (found posted on many Internet sites) ends with the poignant lines: "The pitcher cries for water to carry/and a person for work that is real" (Piercy, 1982).<sup>1</sup>

What struck you as you heard those words, and as you think about the work you do as an ESL teacher? Marge Piercy's "To Be of Use" poem captures both the pain and the purpose in hard work. We all have our contexts where we frame how hard we work in adversarial ways—when we're talking with a district administrator about how our caseloads are too high, for one. However, I'd be willing to bet that one of the things you like the best about your job is that you are a person who consistently chooses to work hard, who cries out for "work that is real" as Piercy puts it, and who delights in the real growth you see in students that results from this hard work.

But, how can ESL teachers, who are *already* working so hard—who are "harnessed to the ox cart" and "harvesting in the fields," take on new mandates as complicated as the Common Core Standards? My suggestion is that we reframe this question and ask, "What can the Common Core do for us and for our students, as we go about our work as educators? How can this long, wordy, controversial document serve as a *tool* to help us to improve the quality of our teaching and, therefore, our students' learning? How can we 'own' the implementation of these standards and create instruction that empowers our students to be both skilled users of English and excellent learners of academic content?"

The Common Core Standards describe what all children need to do at various points in their development to be "college and career-ready." It would be possible for us to talk a long time about whether this should be our primary goal in educating students—that's not my topic for today. Also, the Common Core Standards are organized by grade level, and I have some big arguments with that, given that teachers know that children simply don't fit into neat descriptions of say, what a third grader looks like, especially children who are learning to speak English, who may have interrupted schooling or may have experienced unusual trauma. Therefore, the grade level designations in the CCSS are an issue, especially when they are linked to standardized assessments. Further, we are all wary of how use of these standards shapes high-stakes assessment practices, particularly in a time when teacher

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<sup>1</sup> During the keynote presentation, audience members read the poem in its entirety and discussed it at their tables. The full text can be found at <http://www.northnode.org/poem.htm>.

evaluation is being increasingly linked to students' scores on standardized tests. These are all serious issues about the CCSS and we must be vigilant in participating in ongoing critical conversations about the implementation of these new standards.

But, I also see the Common Core Standards as a potential resource that may serve us very well as we go about the work of teaching English learners and this is where I will focus my remarks today. I ask you to consider with me the kind of learner and the kind of learning that the standards describe and how we can potentially *use* the standards as a tool for reinvigorating our teaching practices and providing high-quality instruction to all students. I'm talking about standards such as the following sixth-grade Social Studies Writing Standard:

CCSS.ELA-LITERACY.WHST.6-8.8

Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation (Common Core State Standards Initiative, 2012).

In 2014 and beyond, we expect all students, and especially our ELLs, to rely on a range of sources, especially up-to-date digital sources, to respond to academic and personal questions. We want our students to be held and to hold themselves to high standards as they use these sources. However, I look at this standard and I see challenges. I see complex, embedded language structures and specialized knowledge about language that *all* students—and their teachers—will need to be able to perceive and use as they seek out sources. ESL professionals (this is where we come in) know how to surface the language complexities of content and processes that go on in school. Now, our colleagues, as they take up the CCSS, will need to learn to do this too. We will need to link arms with our classroom colleagues and work our way through this together.

Kenji Hakuta, a Stanford linguist who is one of those academics who is remarkably good at bridging the theory versus practice gap, offers many resources for understanding the relationship between ELLs and the CCS on a web resource called Understanding Language at <http://ell.stanford.edu>. The Understanding Language site is a goldmine for teachers who are taking on the key challenges of the Common Core. Kenji Hakuta looks at English language learners and sees *thinkers*—he sees children who bring rich resources to the table. These students are not only acquiring English; they have the ability to think and communicate in several languages, they have personal histories that often include challenging life experiences, and they have cultural knowledge that spans multiple contexts. And they are curious and eager to expand and grow what they know, given accessible instruction and contexts. Hakuta (2012) makes the case that ELLs are just the kind of students who need the kind of complex, demanding academic work that the Common Core requires of all learners. However, he also acknowledges that in order for ESL teachers to support this work, they may need to teach in fundamentally new ways. He claims the following:

- With support, ELLs can participate in academic discourse that is focused on rich and exciting academic content

- ESL is necessary but not sufficient; ELLs learn language best when they engage with content
- Focusing on both text and discourse gives ELLs opportunities for extended engagement with complex ideas. (Hakuta, 2012)

Each of Hakuta's points carries with it redefinitions of the roles of ESL teachers, roles that some of us have been exploring through the use of SIOP practices and through exploration of the WIDA standards over the past few years. We can't just "English" students. We must get them engaged in listening, speaking, reading, writing, viewing and representing in ways that promote both academic and linguistic growth. We must also expand our own knowledge about the specific discourse practices of the subject matter areas of science, social studies and math and teach our students to seek out ways to understand these nuanced ways of using language within the disciplines.

Hakuta (2012) goes on to describe the kinds of teaching and learning contexts that make it possible for ELLs to display this kind of linguistic and academic growth. To begin to meet the CCSS, we must create contexts where ELLs:

- Engage in productive oral and written group work with peers
- Engage in effective oral and written interactions with teachers
- Explain and demonstrate their knowledge using complex language and other communicative strategies in different settings and
- Extract and construct meaning from complex text (Hakuta, 2012)

All of this sounds quite challenging. I imagine you're thinking of the many students you encounter every day who sound good in English, but don't do well academically, who have a range of configurations of the kinds of language proficiencies that long ago, Jim Cummins (1979) termed Basic Interpersonal Communication Skills (BICS) versus Cognitive Academic Learning Proficiencies (CALP). In our work at University of Michigan, we've had the same worries. During the past several summers, a group of Ann Arbor ESL teachers, interns who are earning their ESL endorsement through our Master of Arts with Elementary Certification program, and several of my U of M colleagues and I have been working to design curriculum and teach ELLs in ways that recognize that ESL instruction is necessary but not sufficient to ensure the academic growth of ELLs and to engage early adolescent English Learners in complex language use and meaningful content instruction that meets the demands of the Common Core in the process.

I'd like to recognize my Ann Arbor colleagues, Candida Justyna, Sai Sajadi, and Barb Kalisewicz, who are Ann Arbor Public Schools ESL teachers and my collaborator Dr. Debi Khasnabis, who is a Clinical Assistant Professor at the School of Education. We've worked together to design and teach in a summer program for 75 fourth- through eighth-grade ELLs from four elementary schools and one middle school. This is part of the Mitchell Scarlett Teaching and Learning Collaborative, a partnership between the U of M School of Education and Ann Arbor Public Schools, and I am the coordinator of this partnership. We're drawing on the work of our U of M colleague, Dr. Nell Duke, who has conducted research and created curricula centered on project-based integrated reading and writing instruction that focuses on content-based reading and writing. Drawing on our

experiences with SIOP methods and WIDA standards, we've amplified this approach to serve ELLs by designing classroom instruction to focus on both language and content goals that are specifically linked to CCSS.

Duke, Caughlan, Juzwik, and Martin's (2013) research and practical guides for teachers on how children learn to read and write across genres emphasize the need to place meaningful tasks, real audiences, and purposeful activity at the heart of reading and writing instruction. CCSS Writing Anchor Standard #4 clearly states a parallel orientation to reading and writing: "Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience" (Common Core State Standards, 2012, CCSS.ELA-Literacy.CCRA.W.4)." Yet, as Duke points out, in school, "task" is typically the "assignment;" the "purpose" is typically to get a grade or to do what one is told, and the audience is typically the teacher or other students. ELLs, many of whom come from school settings that are far more traditional than the typical American classroom, may be especially oriented to reading and writing to "comply" rather than to achieve meaningful ends. In our summer program we took up this challenge and designed a five-week informational reading and writing unit with biology learning at its core that engaged students in meaningful tasks, provided them with specific audiences, and included writing that was for a specific purpose.

### **Rescued Raptors Brochures Unit**

In the Rescued Raptors Brochures Unit, students took weekly trips to a local nature center that housed approximately 15 rescued raptors that had been injured in various ways and were now cared for on-site. Our initial visit to the center included an oral presentation that served as an introduction to each bird by handlers who were skilled at working with students. We videotaped these presentations for later re-viewing by ELLs, who benefitted from multiple opportunities to review new vocabulary and conceptual information. Each bird had a poignant tale: the owl that had been raised as a household pet, but mistreated; the eagle that had fallen from its nest during a storm and then imprinted on humans who raised it and now thought of itself as a person; and many other stories. Specific information about the habits of each bird was equally engaging to the students. For example, the whole group was thrilled to learn that the vulture's strategy for cooling off on a hot day was to "pee" on its legs! The fourth- through eighth-graders were drawn to the stories, the facts, and the plights of these animals. Having learned broadly about the birds, each student chose a bird to focus on and spent 40 minutes sketching this bird, labeling its parts, and generating questions they wished to learn more about.

The education director of the site, with whom we had planned prior to the visit, talked with the group about the need to have easily accessible information about the birds for visitors' reference and encouraged them to create brochures that would serve this purpose. Teachers worked with the students to plan for a family event, where they would introduce their extended family members to the nature center and teach them specific information about "their" bird, using a brochure that they would create as part of the summer program. We also discussed how these brochures could become part of the collection of materials that would be available to visitors to the nature center. The core elements were established: the task was to create a brochure that would be used for real audiences — their family members and others — for the purpose of sharing the information that they were learning about the rescued raptors.

Upon returning to the school, ELLs worked in pairs and drew on video records of bird-handler presentations, their own observations, and Internet sources to write informative/explanatory individual brochures about the bird of prey they had studied at the nature center. Teachers taught daily mini-lessons that focused on supporting their further exploration of the raptors, including lessons on how to read difficult content online (including use of Google translate), how to revisit videos of handler presentations and take useable notes, and how to keep records of sources of information.

Most significantly, teachers used several key brochures from other contexts, such as veterinary offices and the Humane Society, to serve as “mentor texts” as students began to gather content and examine genre and structures for their brochures. Guided by teachers, ELLs noticed and named the multiple genres of writing that were included in typical brochures, including narrative, informational and autobiographical writing and extensive use of graphics to extend the meaning of written texts. They worked with these “real world” texts, to do a form of writing that happens outside of school for real purposes. Depending on grade level, teachers provided students with brochure templates constructed in a simple graphics program, Pages, that offered more or less guidance in regard to the content and structure of the brochure. Each brochure included narrative writing (telling the story of the bird’s rescue), informational writing and graphics (offering facts about the bird), and autobiographical writing about the author.

In subsequent weekly visits to the science center, students prepared and asked questions that had arisen as they studied their bird, initiating complex and purposeful language interactions with the handlers. They took notes on their findings and revised their brochures. Building on additional science instruction they were involved in during the summer program, ELLs focused on animals and their adaptation to their environments, took digital photos of the birds in their enclosures and learned more about flight by participating in demonstrations of hawks’ flying and hunting abilities. They had multiple opportunities to learn new information, confirm this new information through direct interactions with peers and adults and through online and print resources, and then to write about their learning in the brochure format.

We designed several weekend homework assignments where students interacted with family members about the topic of birds, intending to infuse this unit with culturally responsive pedagogies. For example, ELLs linked their current learning about raptors with their own cultural histories as they asked family members about birds they remembered from their own childhoods in their home countries. Their family members told them of parrots living in backyards, of the importance of the eagle on the Mexican flag, of owls and hawks native to their countries and many other stories. Parents, aunts, uncles, and grandparents, learned about what was happening in the summer program and shared their stories, often in their home languages, and ELLs came back to school and told these stories to their peers. Interestingly, many students included elements of their family bird stories in the short autobiographical piece they included on the final page of their brochures.

This unit was built on multiple Common Core standards and integrated listening, speaking, reading, writing, viewing and representing, all in the service of creating a product—a brochure—that would serve as a vehicle for sharing what one had learned on the family night at the science center. Again, this work was aligned with CCSS, also drawing on the Speaking and Listening standards, which named the importance of being able to communicate what one is learning in a range of forms, including speaking. The following

standard aptly frames this work: “Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace” (Common Core State Standards, 2012, CCSS.ELA-Literacy.SL.4.4). Through multiple mini-lessons and supported writing sessions where students revised and edited their work, students refined a final brochure. They practiced dialogues that they could have with visitors to the birds, planning to stand just outside “their” bird’s enclosure and welcome anyone who looked interested. ELLs imagined what they might say and created scenarios, rehearsed them, and practiced in a simulated science center, cheerfully practicing such phrases such as, “Hi! Would you like to learn about the peregrine falcon?” In addition, students practiced reading sections of their brochures aloud or paraphrasing the information as they read to a therapy dog that was trained to listen as children read aloud. Even the “coolest” eighth graders carefully explained the stories and information about their rescued raptor as this dog avidly listened.

Students presented their work at the science center to a crowd of more than 135 family members, who, while eating ice cream cones, walked among the bird enclosures and talked with the students in English and in their home languages. Much to their surprise, the visitors positioned the students as experts. As they shared key information and offered copies of their brochures, visitors peppered them with questions. Often these were questions that the students found they could answer, or at the very least, they could wonder about together with the visitors. ELLs experienced the pleasure of truly having learned about a topic that interested them and sharing what they had learned through oral and written modes. On the last day of the program, students presented a final time to faculty and staff at the School of Education who were strangers to them, standing in front of flat screens that displayed images of their birds in our technology center at the university. Once again, they were thrilled to be the experts and to see the kind of interest that they generated among strangers by having carefully framed their brochure and speaking points and communicated these clearly. We impressed upon each student that they had now done a presentation at the University of Michigan—something we encouraged them to include in a college application essay to U of M Ann Arbor when they applied a few years down the road.

### **Supporting ELLs language and academic development**

There were many aspects of this unit that promoted both language and academic development among the fourth- through eighth-grade ELLs who participated in this unit. 1.) ELLs had continuous opportunities for meaningful talk with peers and adults throughout the unit. This was often the kind of higher order explanatory talk that is required in academically rich settings. 2.) ELLs had numerous opportunities to record and revisit information through drawing, photos, video, writing handwritten notes and keeping records on the computer. Knowing that learners need multiple encounters with new concepts and vocabulary, this offered students repeated encounters with new language and information. 3.) Mentor texts offered examples of sentence structures, vocabulary, and genre features and assured students that brochure writing was a form of writing that actually occurs outside of school. 4.) ELLs had multiple opportunities to use their home languages to support their research and writing and in some cases, included their home languages in the brochures. 5.) ELLs had multiple opportunities to link to their own cultural backgrounds through family homework and writing choices, as described above. When asked why they had chosen the bird they had chosen, students regularly linked their choice to something from their personal

or family histories. 6.) ELLs had opportunities for multiple rehearsals of oral presentations with feedback from peers and teachers, using their written document to support their interactions. 7.) Finally, students' use of the graphics program (Pages) added opportunities to use visuals to add meaning and reinforced this as a strategy they could use in subsequent work in school. Using technology to create a product with a purpose and doing this with peers with whom they had to negotiate, explain, and argue as they wrote together, increased students' ability to use the computer as a tool to accomplish their own ends. While this unit has been recently successfully taught to another group of students who have English as their home language, it was particularly well-suited to the needs of multilingual students who are curious and smart and thoughtful — and who also need a lot of practice using academic language in all of its forms.

### **Final thoughts**

One of the very best things about teaching is that, even though the structures around us are highly regulated, in the end, what those one to one, one to six, or one to twenty-five interactions with students look and sound like on a daily basis is up to us, the teachers. In teaching, we have quite a bit of agency. If you do great teaching, it's because you *decided* to do great teaching. And to do this, you've got to work with all the tools you can muster. As we designed curriculum for our summer program, the Common Core standards, in their succinct but broad statements of what high-quality learning would include, offered us tools to frame our work to ourselves and to others. We've shared the Rescued Raptors unit with our classroom colleagues who teach these ELLs, emphasizing the links to the CCSS and the moves we made to explicitly teach both the content and uses of language that ELLs needed to fully participate in this unit. Sharing this instruction has opened up rich conversations about practice with classroom teachers where we have named the specific practices that support ELLs, named the ways that these practices also support English-speaking students, and named how this work meets the standards in the Common Core. Significantly, these conversations have also offered classroom teachers images of our shared ELLs, actively engaged in learning both language and content. Such conversations have invigorated our work and focused our attention, together, on ambitious, rigorous teaching.

Have you really investigated the Common Core Standards? Download the free application for your phone and start with the English Language Arts standards. These are not the Michigan Grade Level Content Expectations (GLCEs). They are far broader and, I believe, offer space for creative development of curriculum. Pay special attention to the Speaking and Listening and Language standards. These standards are our bread and butter as ESL teachers and here, in a document that addresses standards for all students, there is finally a recognition that language is central to learning. You may be the person in your school that knows the most about the content listed in these Language standards and your colleagues may need you to interpret! Become a resource for your classroom colleagues and let the standards create a bridge between your work and theirs.

Consider project-based instruction that teaches both language and academic content. Do this small scale to start out and adapt such practices to the constraints of your teaching situation. Give your students real purposes and authentic audiences, and engage in reading and writing that can be found in the world outside of school. Try using the Core to tell the story of your work. Build an overarching narrative to your everyday teaching that links your work to broader goals for students. Keep having great ideas for teaching and invite others into your work. Support the work of classroom colleagues by amplifying what they are

doing. Of course, stay wary — there will always be politics and misuses of standards and assessment tools and we've got to be vigilant about this.

But, try using the Common Core Standards as a tool to do good teaching, to tell the story of this work and to connect to other teachers who are supporting ELLs' growth. This is one way to reinvigorate your teaching of ESL, to link your teaching to both language and academic goals for our ELL students, "to be of use" as Marge Piercy put it in the poem we read today, "and to *continue* to do work that is real."

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## **Bridging Home and School: Using ELL Funds of Knowledge to Enrich English Language Arts Teaching**

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### **Abstract**

At the pre-service level, teachers are often ill-prepared to best serve their English as a Second Language (ESL) students. Some textbooks for Teaching English to Speakers of Other Languages (TESOL) trainees do address the importance of utilizing students' funds of knowledge and cite some examples of successful cases where funds of knowledge have been accessed and leveraged into rigorous academic learning (Díaz-Rico, 2004; Díaz-Rico & Weed, 2006). However, for the most part, teachers are not given much in the way of guidance as to how to access these funds of knowledge. This paper provides a definition and explanation of funds of knowledge and offers several examples of successful ways funds of knowledge have been used in mainstream English Language Arts classrooms, particularly with regard to writing instruction. Teachers become students and culturally and linguistically diverse children become 'experts' in the classroom where funds of knowledge pedagogy is practiced. Implications for the classroom teacher are also discussed.

### **Introduction**

The diverse nature of public school classrooms often presents a challenge to teachers who are invariably white middle class females. With a tightening economy, many school districts find themselves unable to provide sufficient resources in the form of English as a Second Language (ESL) teachers/programs, so the classroom teacher finds herself facing a class of students who range from near non-speakers to fluent speakers of English. She is expected to provide an adequate education to all, despite the fact that she may have students speaking several different languages in the classroom and she herself is fluent in only one...English. There are clearly some challenges to be overcome if she is to be successful in reaching out to and teaching all her students.

Egbert and Ernst-Slavit (2010) acknowledge the need for ESL teachers to understand and make connections to their students' backgrounds, but admit that "it is harder to find descriptions of how this information is to be collected and used" (p. 40). Furthermore, at the pre-service level, teachers are often ill-prepared to best serve their ESL students. Some textbooks for Teaching of English to Speakers of Other Languages (TESOL) trainees do address the importance of utilizing students' funds of knowledge and cite some examples of successful cases where funds of knowledge have been accessed and leveraged into rigorous academic learning (Díaz-Rico, 2004; Díaz-Rico & Weed, 2006). However, for the most part, teachers are not given much in the way of guidance as to how to access these funds of knowledge. And then there is the classroom teacher, described above, who has limited ESL support. How is it possible to access and connect to all our students' backgrounds so that we may better teach them?

In this paper, I offer, as a small form of amelioration, the concept of utilizing students' funds of knowledge, as well as some means of accessing and using student funds

of knowledge to enrich English Language Arts programs, with a particular focus on writing. I start with a description/discussion of funds of knowledge, followed by a discussion of some means of accessing and using them in the English Language Arts program. Finally, I discuss some implications for our teaching.

### **Funds of Knowledge**

With the ever-growing emphasis on standardized testing, children only experience and are expected to become proficient in the dominant paradigm of knowledge (González & Moll, 2002). Utilizing funds of knowledge as a framework for pedagogical practice highlights the social and cultural knowledge and practices children, particularly culturally and linguistically diverse children, already have to offer, despite the devaluation of this knowledge in the school system. This social and cultural knowledge or “funds of knowledge,” a phrase used by Moll and Greenberg (1990), essentially refers to “historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well being” (p. 323). Theoretically, the funds of knowledge approach is rooted in Vygotsky’s (1978) sociocultural and historical theories of learning, i.e., that learning is a social process and that we all learn from more experienced others. The funds of knowledge pedagogical approach assumes that all “people are competent and have knowledge, and their life experiences have given them that knowledge” (González & Moll, 2002, p. 625). While González and Moll made this particular claim regarding high school students and their parents, they and others (cf., McIntyre, Rosebery, & González, 2001; Moll & González, 1994; Trumbull, Rothstein-Fisch, Greenfield, & Quiroz, 2001) have focused their research and teaching efforts on younger children, particularly those that Eve Gregory (2008) calls new language learners (NLLs).

There is a considerable body of research which has shown that incorporating the funds of knowledge children bring with them into the curriculum has tended to increase the self-esteem and academic achievement of minority and lower socioeconomic class children by bridging gaps between school and home knowledge (Dworin, 2006; Gay 2000; Ladson-Billings, 1994; Lee, 1998; Lipka & McCarty, 1994; Olmedo, 1997; Rosebery, McIntyre, & González, 2001; Street, 2005). Furthermore, as Trumbull et al. (2001) report, by attending to the sense of belonging and well-being of the children in the classroom, which, in turn depends on developing respectful, conflict-free relationships with families, teachers see growth in student academic achievement (p. 133).

Literature that addresses students as researchers of cultural and linguistic artifacts (Bloome & Egan-Robertson, 1998; Egan-Robertson, 1998; Elmesky, 2005; Elmesky & Tobin, 2005; Montero-Sieburth, 1998; Schaafsma, 1998; Wigginton, 1985) strongly suggests that through inviting students to engage in authentic (i.e. beyond the school walls) research, students developed deeper, more relevant relationships with academic knowledge by tapping into the cultural and historical knowledge of their neighborhoods, family members, and friends. They simultaneously engaged with, created, and preserved cultural knowledge (Bloome & Egan-Robertson, 1998). In an effort to enable students to utilize their incredibly rich and diverse funds of knowledge in the classroom, Curry and Bloome (1998), for example, developed the *Learning to Write by Writing Ethnography* project; a project which, through the process of teaching fourth- and fifth-grade students how to conduct ethnographic research and write ethnographically, also engaged them in researching and legitimizing their community knowledge. In this case, according to Bloome and Egan-Robertson (1998), students recreated themselves both as learners and as producers of

knowledge as they transformed their classrooms into inquiry workshops and used what they learned about their communities to enhance their academic learning (Evans, 2010).

Olmedo (2009) describes a phenomenon she calls “border blending”, a modification of the metaphor of “border crossing” as popularized by Anzaldúa (1987). Border blending is a means of reaching across borders to acknowledge and validate both community and school realities – a means of helping children to “navigate in the spaces between the borders of language and culture” (p. 23). She cites code-switching as one means of border crossing and suggests that using the cultural and linguistic resources of children and communities to enhance children’s learning of English skills needed for success is an application of the use of funds of knowledge to blend borders.

### **Accessing Student Funds of Knowledge**

In the original funds of knowledge research, interested teachers met with university researchers to learn first about conducting ethnographic research (González, 1995). Ethnographic research, typically associated with anthropological study, is the study of an ethnic group. The researcher spends time with the group being studied, observing and participating in cultural practices, recording information, and interviewing members of the group. Invariably, one or two members of the group become trusted informants for the researcher. Margaret Mead, for example, is one notable anthropological researcher who wrote *Coming of Age in Samoa* (1928/2001), an ethnography of adolescent Samoan girls.

The concept of teachers spending time with students’ families and learning from them was a key element of the funds of knowledge project. Luis Moll, an educational researcher, and Norma González, an educational anthropologist, recruited and trained interested teachers from Tucson, Arizona, in ethnographical research methods, particularly the ethnographic interview. Teachers then approached families of the Mexican-American students they taught and were able to visit the homes of several of their students. It is critical to note that these were not typical home visits by the teachers. Rather, the teachers adopted the role of learners; that is, they emphasized that they wished to learn more about the families they visited, instead of telling families what they should do to better help their children succeed in school.

Over the course of the funds of knowledge project, teachers made three home visits, each time coming with a questionnaire to help guide discussion; first they wished to learn about family and labor history; second, they wished to learn about regular household activities; and finally, the third (often the most lengthy and revealing) visit was based on how parents and caretakers view parenthood, including thinking about how their (parents) school experiences compared with those of their children. Teachers took notes, wrote field notes and met with the researchers to discuss findings on a regular basis. These meetings served to “help mediate the participants’ comprehension of social life in the households they study” (González & Moll, 2002, p. 634). Clearly, from this brief description, one can see that time is a considerable element in accessing student funds of knowledge. However, as we’ll later see, such a time commitment need not be the case.

One outcome of the utilization of funds of knowledge as a pedagogical tool was an upswing in the use of the inquiry model of teaching in which students become active consumers and producers of knowledge, rather than passive receptors (Dworin, 2006; Street, 2005). Other notable outcomes include identification and validation of the social and cultural knowledge of the students (Rosebery, McIntyre, & González, 2001), increased family and community involvement in schools, and teacher professional development

(González & Moll, 2002). I now briefly describe some examples of how pedagogy based on funds of knowledge can be applied to the English Language Arts classroom.

### **Funds of Knowledge Applications to English Language Arts**

#### *The Family Stories Project*

In his Family Stories Project, Joel Dworin (2006) worked with a group of fourth-grade Spanish and English speaking students. After sharing and discussing two stories about growing-up experiences of family members, the fourth graders were asked to have several family members share with them a story about growing up. Students were asked to select one of the stories they heard to write up and bring to class. The story had to be a true one.

In groups, the students shared, discussed, and revised their stories based upon feedback given by fellow group members. Often, based upon such feedback, students returned to the family member whose story they decided to write up to get more information or detail to satisfy the feedback they were getting from their fellow writers. Those whose stories the students were recounting were asked to verify (by signing drafts) that the story was accurately rendered. Stories were edited and students were paired up to translate each other's story into English or Spanish (depending on the language the original story was written in). Once translations were completed, each student created an illustration that fit the story. Each document was then typed up and published in two books (*El gran libro de bellos recuerdos de nuestras familias* and *The Magnificent Book of Memories*).

#### *The Funds of Knowledge Writing Project*

Chris Street (2005) advocated the use of writing as a window into the funds of knowledge that culturally and linguistically diverse students frequently hide as they struggle with becoming familiar with the dominant culture of the classroom. He noted the difficulty secondary teachers, who may be responsible for a hundred or more students, have in making extended visits to students' homes. By combining that difficulty with his research into writing attitudes, namely, that students are more interested in writing about topics of personal interest than they are writing about other topics, he developed the Funds of Knowledge Writing Project.

Street's project enabled his students to write about the topics that interested them most, which allowed him to weave his students' experiences into his educational practice. He reported that he "began to listen more and talk less, asking students what they knew and cared about.... They became my teachers, allowing me a unique glimpse into their lives outside of school. In doing so, I found myself learning many important lessons about the cultural and familial resources of my students" (Street, p. 24). Above and beyond the benefits of having a class of urban adolescent writers engaged in their writing, Street reported a deepening of his relationship between himself and his students' families. He noted that they approached him regarding "ways they could to use the school work of their children to enact positive changes in their own lives" (p. 24). Instead of being the "expert," Street became the learner, thereby enacting Elbow's (1990) claim for the need to invest more authority in the student in order to enhance student learning. His work with students opened up new opportunities to work with both students and their families, thereby bridging home and school.

### *Contrasting Cultures*

Sharon Maher (Maher, Epaloose, & Tharp, 2001) focused on her students' writing skills in preparation for a state writing assessment as she planned a unit that contrasted Jewish culture with her students' Zuni culture. A white teacher living in a Zuni pueblo "teachorage"<sup>1</sup> for three years to that point, Maher realized her knowledge of Zuni ways was superficial, at best. However, she was not without resources; she had read up on Zuni culture, and had Zuni colleagues, but her greatest resource would be the Zuni students who populated her classroom. It's important to note that, as with most Native American/First Nations peoples, the Zuni people experienced "subtractive schooling," a process which "divests these youth of important social and cultural resources, leaving them progressively vulnerable to academic failure" (Valenzuela, 1999, p. 3). Hence Maher was aware of an element of distrust between school and home in the Zuni pueblo. However, Maher's plan was to engage students in instructional conversations (dialogue, questioning, and sharing of ideas and knowledge) as a prelude to having them write. With the assistance of her Zuni paraprofessional, she introduced the idea of culture and traditions by modeling and demonstrating (i.e., Maher sharing a traditional Irish meal, the paraprofessional discussing a display of bird feathers). Students responded in kind, sharing and displaying various cultural artifacts.

Maher then introduced the Jewish culture through the medium of the movie *Fiddler on the Roof*, a fictional work that illustrates elements of Jewish culture. Through instructional conversations, students were able to see similarities and disparities between the two cultures and were able to compose a paper comparing and contrasting the two cultures. Revision and editing were introduced and taught in a step-by-step manner reminiscent of Delpit's (2002) focus in direct instruction for members of the non-dominant culture. Maher noted that by contrasting cultures, her students had "an opportunity to initiate discussions with their parents and grandparents, asking about the uses and meanings of artifacts and the differences between today and the times of their ancestors" (p. 24). In this case, she became a learner along with her students.

### *My Own Experiences*

Prior to undertaking graduate studies, I spent approximately 12 years teaching in a small northern British Columbia community. The majority of the students I taught were of Tahltan First Nations ancestry. As with Maher's Zuni students, the link between home and school was tenuous, due, mostly to the history of "subtractive schooling" (Valenzuela, 1999) mentioned above. The school in which I taught was a low performing school – the district was one of the lowest scoring districts in the Foundation Skills Assessment (FSA)<sup>2</sup>, British Columbia's provincial assessment program.

Middle school level English Language Arts was one of the subjects I taught at this school and writing was a topic that was resisted by many of the students, Tahltan and white alike. At the time, two elders from the Tahltan community (Grandma Shana and Grandma May<sup>3</sup>) spent time in the school teaching the Tahltan language. Students loved to have the elders come into the classroom and these teachers from the community were often bombarded with requests to tell stories. Usually, the stories came once the language lesson part of the visit was completed. I noticed that the children were entranced by the folktales Grandma Shana and Grandma May told. These were stories of Wolf and Raven and were retold in both Tahltan and English. It seemed to me, at the time, that it would be instructionally valuable to tap into these stories in my English Language Arts class. I

wondered how best to do that and decided to ask my students write the stories out, suggesting that we put them into a play format and perform them. The Tahltan students in my class were enthusiastic about the project and spent time talking with their elders and writing out the stories. We worked together to assemble a small collection of stories and I taught students how to re-write the stories in script form, leaving it up to groups to decide which ones to write up. Our goal was to perform the stories for our Tahltan teachers. Only one story was ready for performance by the end of the time allotted for the project and it was performed enthusiastically in the classroom for Grandmas Shana and May. Oddly enough, the group that succeeded in completing the project in time was the group that I thought would be least successful, as there were a couple of young boys who were struggling in school in that group.

In 2001, I started my Masters studies at the University of Utah and it was there that I discovered that what I'd done was to tap into my Tahltan students' funds of knowledge, thereby accounting for the popularity of that particular writing project I'd undertaken with the students. It was clear to me that by becoming the learner and facilitating my students' writing of the stories in both story and script form, I had bridged the school/home divide much as Street (2005), Dworin (2006), and Maher et al. (2001) had done with their students.

For my Masters thesis, I proposed collecting information about local plants useful to the Tahltan First Nations people and using that information to create a month long unit of school work that would combine Social Studies, Science, and English Language Arts into the study of local plant uses. In essence, I attempted to re-create the original "funds of knowledge for teaching" project (González, 1995). This project wasn't quite as successful because I was in Salt Lake City and was relying on others to guide the students in their search for information about local indigenous plant uses. Nonetheless, the project had rich possibilities and a similar project, has been completed in that school district although not with the same First Nations group.

It seems clear, from the above examples, that utilizing the knowledge that culturally and linguistically diverse children have when they come to schools in the U.S. and Canada, while undervalued by our respective countries' school systems, has the potential to enable such children to become more fully engaged in the learning of English Language Arts and to become "experts" in their fields. However, this has implications for teachers and it is those implications that I now discuss.

### **Implications for Teaching**

When we talk of employing mainstreamed ESL children's funds of knowledge to leverage academic learning in writing in the Language Arts, there are a number of implications and challenges that must be considered. Some of these relate to language use in the classroom, the role of the teacher, time management, and possibly dangerous assumptions that can be made.

First, as Mullock (2006) tells us, "an important feature of TESOL is knowing one's students – their backgrounds, personalities, proficiency levels, strengths and weaknesses – and being able to adjust one's teaching to suit their needs" (p. 63). This is true of all teachers, if we are to reach and teach all of the children entrusted to us. Knowing one's students is one of the implications for teachers. When there are speakers of several different languages in the classroom, learning as much as possible about the students is complicated. A teacher may be familiar with another language, but most often classroom teachers are monolingual. How then, is the teacher to understand the spoken and written language of all

the children in the classroom, for, as Gibbons (2002, 2009) and others suggest, new language learners should be allowed to use their native or home language in school?

In a similar vein, many of the studies I've drawn upon in this essay, including my experiences, describe using the funds of knowledge of one minority or culturally and linguistically diverse group of children, such as Mexican-American, African American or Aboriginal children (Curry & Bloome, 1998; González & Moll, 2002; Maher et al., 2001; Street, 2005). However, it is quite possible that there may be more than two language groups in a classroom (e.g., English, Spanish, and Chinese). The teacher interested in using children's funds of knowledge must then be aware of and carefully consider what funds of knowledge they can ascertain and best utilize to maximize children's school learning (Andrews & Yee, 2006).

The role of the teacher becomes a little more precarious when focusing on children's funds of knowledge because there is a shift from the "teacher as knowledge dispenser" role to "teacher as knowledge receiver" role. Similarly, there is a shift from the "student as knowledge receiver" role to "student as knowledge dispenser" role. In all examples discussed above, the teachers became learners and the students and their families were the experts. Teachers interested in learning about and using their students' funds of knowledge to develop classroom curriculum must be comfortable in relinquishing some curricular control. Furthermore, Moll and González (1994) note that teachers must also become comfortable with "teaching children how to exploit these resources [funds of knowledge] in their environment, how to become, through literacy, conscious users of the funds of knowledge available for their thinking and development." (p. 453). With regard to writing in particular, Delpit (2002) reminds us that it is necessary, in writing instruction, to ensure that we are teaching all children the conventions of writing in the dominant culture. So we must not only be a learner of our children's cultures, but also an expert in the conventions of the dominant paradigm with regard to writing. After all, both teachers and parents want our students/children to be successful.

Utilizing children's funds of knowledge in the English Language Arts classroom may mean re-examining classroom routines and the time used for writing (Hedges, Cullen, & Jordan, 2010). Many writing and reading experts acknowledge that time spent writing is extremely beneficial for building reading skills (Kirby & Crovitz, 2013; Ray, 2006; Routman, 2005). Routman, in particular, indicates that "for our English language learners, who encounter much unfamiliar language even in beginning reading texts, the reading-writing integration is a necessity" (p. 120). It would seem then, that time spent working on writing skills would be time well spent in the elementary English Language Arts classroom.

Finally, in terms of assumptions, teachers need to be aware that cultural and linguistic diversity ought not to be trivialized in what James Banks (2004) refers to as the "heroes and holidays" approach; that is, celebrating important events or people of a culture and not digging deeper to access children's life skills and expertise in areas outside of school-based knowledge. Coupled with the challenge of not trivializing cultural diversity is the challenge of acknowledging that community is not a static entity, nor do all members of a community hold the same customs and beliefs (Andrews & Yee, 2006).

## **Conclusions**

Despite the challenges of utilizing children's funds of knowledge in the English Language Arts program, particularly with the teaching of writing, the rewards can be impressive. Conteh and Brock (2011) tell us that "learning is about participating with others

to engage with social and cultural tools in order to co-construct new meanings” (p. 350) and urge us to make our classrooms “safe spaces” where all learning experiences are recognized and valued, not just those of one culture. The key to developing those “safe spaces” lies in the relationships that are constructed between learners and educators. Hence, it is imperative that classroom teachers learn as much and as quickly as possible about the students in our classrooms.

I suggest that one way of doing so is to involve students in writing about those topics they know best – themselves, their cultures, their interests, their families. Narrative writing can be developed in this manner. If, as part of the English Language Arts program, we teach students to create questions and conduct interviews, then we position students as researchers, producers of knowledge, and their writing becomes informative in nature. Using the knowledge gained through our students’ investigations and writings about their funds of knowledge, we can teach them to compare and contrast cultural traditions, holidays, etc. (Maher et al., 2001). This can lead naturally into writing opinion pieces about cultural variants of similar stories or cross-cultural story-telling traditions. Most importantly, when we give children authentic writing opportunities such as learning about and using their funds of knowledge affords, we engender in them the desire to write more, thus building fluency (Kirby & Crovitz, 2013) in the target language. As Taylor (1993) reminds us, “[I]n developing educational opportunities for families, it is essential that we begin by learning about their lives so that together we can build meaningful connections between everyday learning and school learning” (p. 551). All the students we teach deserve nothing less.

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## Footnotes

<sup>1</sup> Maher reports that non-Zuni teachers were housed in a compound adjacent to the school, separated from the rest of the pueblo. The pueblo provided the housing.

<sup>2</sup> The FSA is a test of reading, writing, and numeracy skills administered to fourth and seventh graders throughout British Columbia each school year. Information gathered by the FSA is analyzed and reported on provincial, district, and school levels and is reported as percent of students exceeding, meeting, or below grade level expectations. Most recently (2013), of the fourth graders tested in the school district I taught in, 50%, 60%, and 40% were not meeting fourth-grade reading, writing, and numeracy expectations respectively. These data apply to both all students and Aboriginal students. The seventh grade results are similar.

<sup>3</sup> Names are pseudonyms.

## **Using American Culture as a Context for English Language Learning**

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### **Abstract**

While most English as a Second Language (ESL) instructors would agree that culture and language are inseparably entwined, the cultural topics provided in ESL textbooks are often insufficient to provide ESL students with the cultural knowledge needed to succeed at the university level. This paper discusses how carefully chosen cultural topics can be used as “content” in the ESL classroom for content-based instruction. This paper also provides examples of units that can be included in an American culture class and explains how teaching American culture can be used to build rapport among students and instructors, and provide students with an intrinsic motivation for learning.

Language is the blood of the soul into which thoughts run and out of which they grow.  
–Oliver Wendell Holmes

Throughout our experience as language learners living abroad, we quickly learned that learning a language requires more than memorizing grammar rules, vocabulary, and pronunciation. Culture informs language and language informs culture. Although explicit teaching of culture may not occur in all English as a Second Language (ESL) classrooms, we argue that using culture as the context to teach ESL is essential for students in acquiring the English language, and we propose some methods for teaching culture in the ESL classroom. The reasons for the lack of explicit teaching of American culture are varied: the fleeting nature of cultural components, particularly pop culture, can make instruction difficult, or there may not be a specific culture learning objective in skill-based ESL classes. Lastly, according to Rucynski (2011), teachers often struggle with what type of cultural component to include in their lessons. Should they focus “on daily living tips like etiquette, and other cultural differences or on pop culture” (p. 8)?

Before entering into a discussion about the teaching of American culture to English language learners (ELLs), it is important to define the very concept of culture. Dictionary.com (n.d.) defines culture as “the behaviors and beliefs characteristic of a particular social, ethnic, or age group.” While there is nothing wrong with this definition, it seems rather broad. Language teaching specific literature offers a different definition of culture. Warikoo and Carter (2009) define culture as “shared values, traditions, language, ethnic consciousness, and social experiences” (p. 368). Others define culture as something that exists within social contexts and is shared by all actors (Gans, 1979; Goodenough, as cited in Warikoo & Carter, 2009; Lamont & Molnar, 2002; Williams, 1976). In addition, Ajayi (2010) says that culture is not static, rather it is something that constantly evolves and changes as people interact in social contexts. For our purposes, we will define culture as

shared values that exist within specific social contexts, with the understanding that culture is not one entity; rather, it is fluid and evolutionary. This paper specifically focuses on American culture; that is, those shared values that are uniquely “American.” In evaluating the merit of a cultural topic, Rucynski (2011) suggests answering these two questions: 1) “Will the content help students to understand more about the target culture?” and 2) “Will the content help students to be able to communicate with people from the target culture?” (p. 9) These two questions are at the crux of determining what cultural aspects to teach ELLs.

A review of ESL textbooks leads to some conclusions regarding the teaching of American culture. Skill-based textbooks may make some attempt to incorporate American culture into a lesson; however, this is often used merely as a model for teaching a specific English skill, not to teach students the content itself. Furthermore, the cultural aspect in skill-based textbooks is often decontextualized. For example, a textbook may present a reading about the first Thanksgiving to demonstrate the use of the past tense, but the cultural significance, history, and traditions of Thanksgiving are not discussed, leaving students with gaps in their cultural knowledge. Finding appropriate American culture-based textbooks also presents some difficulty. Due to the difficulty and expense of obtaining the rights to popular movies and music, it is often difficult to find a mass produced textbook that addresses these topics. In addition, because pop culture changes so rapidly and there is a plethora of content available online, there has also been a move away from pop culture-based textbook development. Looking at recently published ESL textbooks used at the university level demonstrates that there is a trend towards using academic topics as the context for modeling the target language, rather than using cultural topics (Brooks, 2011; Hilles & Houck, 2008 ). Although students at the university level should be learning academic language, they could learn it through a content that is more meaningful. In addition, although content based on academic units such as sociology or biological science may be useful for some students, it may not be universally applicable to students studying, for example, art and design or construction management. While there has been a movement away from the pop culture approach to teaching culture, examining current corpora for American culture concepts likely to be discussed in a variety of academic fields could target materials applicable to a majority of students that could be used on an ongoing basis.

In light of the discussion regarding what culture is and the current state of teaching American culture in the classroom, the next logical question is: Why? Why should we teach American culture in the classroom? Opponents argue that culture does not have a place in the university-level or adult English classroom. The ideas behind this view are that class time is limited, and students need to learn the English skills that they need, not cultural references. In addition, teachers and administrators against explicitly teaching culture argue that students will acquire cultural knowledge on their own by living in the US. However, we argue that explicitly teaching culture and using culture as the context in skill-based or integrated skill courses enhances students’ learning of English and provides them with essential cultural knowledge that will help them to navigate academic life more fluently.

First, ESL teachers should teach culture in the ESL classroom today because language and culture are irrevocably intertwined. The foundations of the Teaching English to Speakers of Other Languages (TESOL) field reinforce the idea that language cannot be separated from culture. The Sapir-Whorf hypothesis, also known as the linguistic relativity principle, is the idea that differences in the way languages encode cultural and cognitive categories affect the way people think, so that speakers of different languages will tend to

think and behave differently depending on the language they use (Kay & Kempton, 1984). The Sapir-Whorf hypothesis is still instrumental in second language acquisition theory, even today, as it is taught to current TESOL graduate students. Another theorist who contributed to the idea of the interconnectedness of language and culture is Lee Vygotsky. Vygotsky's theory, summarized by John-Steiner and Mahn (1996), is that in developmental psychology, children's cultural interactions inform language learning, and vice versa. This demonstrates that in the field of psychology, language and culture are seen as informing one another and cannot be separated in the brain. Therefore, ESL teachers should not attempt to separate language and culture in order to fully utilize the brain's capacity for second language acquisition.

Recently, Teachers of English to Speakers of Other Languages (TESOL) included teaching culture as a goal of the field in *Adult ESL Language and Literacy Instruction: A Vision and Action Agenda for the 21st Century* (2001). One of the suggested action items Action 1 states that teachers should:

Align curricula with learners' goals and needs and include instruction in the following, as appropriate: language, culture, preparation for citizenship and civic participation, family education (including involvement with children and children's schools), workforce preparedness (movement into the workforce, through a number of work skill levels, and to advanced job placement), academic content, life skills, and immigrant rights (TESOL, 2001). This action item from TESOL lends pedagogical support to teaching culture when teaching ESL as an important goal of the profession.

American culture instruction provides a context for language learning. According to Regent (1985), reading comprehension is heavily dependent on the reader's knowledge of the world and prior experience, including cultural background. Students reading across cultures may be applying inappropriate schemata, resulting in a comprehension breakdown, particularly at the macro level (Pugh, 1989). While American culture provides a context for language learning, it is also important to teach pragmatics. According to Tan and Farashaiyan (2012), pragmatic competence is recognized as the ability of learners to make use of a variety of linguistic formula appropriately when communicating in a context that is socially and culturally specific. For example, Americans have culturally acceptable ways of making requests. Tan and Farashaiyan (2012) argue that this skill is particularly important to teach to ELLs because most L2 interactions take place in the form of requests.

We also see that learning culture alongside language provides essential motivation for language learning. Gardner's studies on motivation provide a definition of integrative motivation, which is that students' desire to fit in with the target culture affects their motivation to learn the language (Norris-Holt, 2001). Norris-Holt (2001) points out that students' level of integrative motivation can have a significant effect on their language learning specifically. The take-away for ESL teachers is that tapping into students' integrative motivation by using American culture as the primary context for language learning can support and enhance their ability to acquire English language fluency.

The teaching of American culture is appropriate in both adult education and the university. For students in adult education, particularly those with children in school, American culture instruction is necessary in order to help them navigate cultural issues their children may face in school, such as holidays. In addition, many schools rely on the concept of volunteerism, which parents may be unfamiliar with. Instruction in these matters will

help parents integrate with other parents and integrate their children into the school system. For adults without school-aged children, American culture instruction can also help them in the workplace, building social relationships with coworkers.

The teaching of American culture has multiple applications in the university environment. In order to find American culture references in the university classroom, we searched the Michigan Corpus of Academic Spoken English (MICASE) (Simpson, Briggs, Ovens, & Swales, 2002), a database of lecture transcripts from the University of Michigan. In order to disprove the argument that culture was not discussed outside of the humanities, the search was limited to native speakers in the areas of “Biological and Health Sciences” (*Intro Biology Discussion Section*, 1999) and “Physical Science and Engineering” (*Intro Programming Lecture*, 2000). Within these two lectures, both approximately an hour in length, there were multiple references to American culture, such as the *New York Times*, Home Depot, Berkley, and a reference to stacking fruit in a pyramid with the explanation “it’s often called the cannonball arrangement because it’s what you see at war memorials” (*Intro Programming Lecture*, 2000). In addition to cultural references, behaviors that may be confusing to those outside of American culture, such as humor in the lecture and an informal environment where students are allowed to interrupt the lecturer to ask questions, were also apparent.

Outside of the classroom, international students also experienced shock regarding another academic environment: the discussion board. Tan, Nabb, Aagard, & Kim (2010) studied Chinese students’ reactions to online conversations, with specific regard to cultural differences. Students felt “shock” over the way American students incorporated their personal experiences, feelings, and opinions into the online discussion. The Chinese students believed that class time should be reserved for academic discussion. One participant expressed his opinion as such:

It was absolutely a cultural shock when I expanded everybody's postings to read and found that many times they were chatting about their personal travels and hobbies, which, in my eyes, had no relation with the academic content we were discussing. That wasted my time. (as cited in Tan, et al., 2010, p. 12)

The cultural differences here lie in the fact that in American academic environments, opinions are not only valued but, at many times, required. Lastly, slang is another aspect of American culture. Homuth and Piippo (2012) found that slang words and expressions are used in both work and academic life, and that being able to understand and use slang has an impact on an ELL’s ability to communicate socioculturally. If we continue with the idea that language and culture are intertwined, we can say that students who cannot navigate formal and informal registers in the appropriate cultural settings run a risk of behaving inappropriately in certain situations, leading to a potential reduction in learning English due to a lack of confidence, embarrassment, and feeling left out or feeling like they do not belong.

There are two ways that we suggest instructors can incorporate a cultural element in the ESL classroom. One is by using pop culture as a context for cultural and language learning. Rucynski (2011) explains how media/pop culture phenomena can be used to teach American culture. He used *The Simpsons* to teach American culture to Japanese students in Japan. Of course, the author discusses the need to provide scaffolding and clear instruction before introducing the clips, and he also points out that the focus should not necessarily be

on the humor, but on the content. In another example of using pop culture to teach ESL students, Arizona State University's American English and Culture Program includes a component called "Reading Theater," where students read a novel or reader and then watch the movie that was based on the book (Chang, 2011). Using pop culture as a starting point for discussion of cultural values is one way to model the target language in an authentic way, but also to teach students cultural knowledge that will enhance their language learning and make the information real and interesting to them.

Another way to incorporate cultural aspects into an ESL course is to send students out into the culture. Being in the United States, ESL students have ample opportunity to observe American culture in action. For example, Arizona State University's American English and Culture Program also combines an academic English program with cultural components such as conversation partners with Americans, field trips to sporting events, and guest speakers on cultural topics (Chang, 2011). This is similar to what we have done and continue to expand through the American culture courses at Eastern Michigan University (see the appendix for syllabus and course objectives). Sending the students out into the community to interact with Americans is another way to provide a rich and rewarding learning experience that enhances their language skills.

Preparation for the cultural excursions mentioned in the appendix can take place in a variety of ways. For example, while many of our students are familiar with "football" (soccer) in their country, the concept of American football is foreign to many. In order to prepare students for an excursion to an American football game, students could begin by brainstorming a list of typical sights at a sporting event in their country. The teacher could then present the rules of American football, perhaps even showing some video clips of plays or terminology in action. Students could then compare sporting events in their countries and the United States prior to attending a game. After a brief introduction to the sport, the class could attend a sporting event together on a college campus. After the game, the students could return to their lists of observations at sporting events in their countries and make comparisons between American sports and sports in their countries. This lesson not only activates prior knowledge from students about sporting events, but it also helps them to make connections between old and new material and, therefore, increase recall about American sporting events.

Similar preparation can take place for other cultural units mentioned on the syllabus in the appendix. When discussing the American classroom, students can role play office visits to a professor, or practice making phone calls using their phones in class to obtain information from a professor or a department on campus. In addition, the ESL instructor might send students on a campus "scavenger hunt," whether in person or virtually, to find out information about events or services on campus. Holiday-themed units provide an excellent opportunity to bring realia into the classroom, as well as to discuss and explain what students may be observing in their daily lives around the holidays.

Explicit cultural instruction allows students to break down the barriers in language learning. If students want to continue studying or working in the United States once their formal study of the language is complete, they will have to have an understanding of American culture in order to fully participate as an integrated member of the community. In addition, explicitly teaching culture alongside language increases students' motivation and interest, and gives them a platform for faster and more effective language acquisition.

American culture is not one more thing to teach; rather, culture can be the content for teaching everything.

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## Appendix

Syllabus and Schedule for ESLN 117 at Eastern Michigan University

### ESLN 117: American Language & Culture I

Eastern Michigan University

Fall 2012

**Instructor:** Ms. Allie Piippo

**E-mail:** apiippo@emich.edu

**Class Time/Day:** 1:00-3:40pm Friday

**Office:** 200 Alexander

**Room:** Pray Harrold 218

**Mailbox:** 219 Alexander "Piippo"

**Office Hours:** MW 2:00-3:15pm, Thursday 3:30-5:00pm, or by appointment

**Course Description** This course introduces students to broad themes in American Culture and targeted issues related to the academic culture of American universities. The course uses reading, media, and external oral assignments to provide international students with knowledge, skills, and cultural capital needed to understand America and to succeed in the university.

#### Course Objectives

This course will:

1. provide students with cultural knowledge widely known by their American peers.
2. develop in students a sense of place within the EMU community.
3. provide students opportunities to practice and learn English in a variety of cultural settings.
4. expand students' vocabulary within the 5,000 most common words needed for conversational fluency
5. provide students with the skills to research aspects of American culture and/or American values through a variety of investigation methods (surveys, etc.)
6. build idiomatic language fluency
7. identify types of language used in humor (irony, sarcasm, etc.)

#### Required Materials:

- All About the USA 1: A Cultural Reader (second edition) by Milada Broukal.

ISBN: 978-0-13-613892-1

- The Eastern Echo

#### Required out-of-class assignments:

1. Students must attend four sporting or cultural events on campus and bring a program or ticket to class as proof of attendance. 1 event MUST be an EMU football game. Students must write a brief summary of the event (a 5-10 sentence paragraph).

2. Students must watch an American TV show outside of class and answer summary and reflection questions every week. We will discuss the show in class together.

**Scoring:**

Vocabulary Journal	10%
T.V. show summaries & reflections	10%
Cultural knowledge quizzes (vocabulary, grammar, & facts)	30%
EMU activity attendance reports (4)	20%
Final Project	30%

**Tentative Schedule**

**ESLN 117 Fall 2012**

Week 1 Fri 9/7	Course Introduction; Initial assessment; American Culture Overview
Week 2 Fri 9/14	Textbook Part 1: The United States: Florida, Washington, Vermont, Michigan  American Football Introduction: Vocabulary and Rules  Vocabulary: Making a vocabulary journal, state names, football terms
Week 3 Fri 9/21	Textbook Part 1 (continued)  American Football: Idioms and Culture  Vocabulary: State products, football idioms
Week 4 Fri 9/28	Adjusting to the American Classroom: office hours/talking to your professor; appropriate & inappropriate in-class behavior; plagiarism & cheating; study groups & friendships with classmates  Vocabulary: US classroom, popular majors and courses
Week 5 Fri 10/5	Textbook Part 2: U.S. Inventions and Inventors: Microwave, Dishwasher, Laser, iPod Vocabulary: Inventions, technology, medicine
Week 6 Fri 10/12	Textbook Part 2 (continued)  Textbook Part 4: Holidays and Special Days: New Year's Celebrations, Labor Day; Holidays this semester: Halloween,

Thanksgiving, Christmas, Hanukah

Vocabulary: Holiday items and ideas

Week 7 Textbook Part 4 (continued)

Fri 10/19 Textbook Part 6: US Arts and Entertainment: Walt Disney,  
Maya Lin, Ella Fitzgerald, Elvis, Michael Jackson,  
Modern Celebrities  
Vocabulary: Jobs in the Arts, pop culture

Week 8 Textbook Part 6 (continued)

Fri 10/26

Week 9 Textbook Part 7: The Story of Young America:

Fri 11/2 Christopher Columbus, Paul Revere's Ride,  
The Railroad, Politics Today and the Election  
Vocabulary: History, politics

Week 10 Textbook Part 7 (continued)

Fri 11/9 **Project guidelines – begin project**

Week 11 Social Media and the Internet: Facebook, Twitter, Instagram,  
YouTube, Online Etiquette and Safety

Fri 11/16 Vocabulary: Security & privacy, internet slang

**Fri 11/23 NO CLASS – Happy Thanksgiving!**

Week 12 Social Media and the Internet (continued)

Fri 11/30 Work on project in class

Week 13 Review & Semester Wrap-up

12/7

**Final Project Due: Friday, December 14 1:00pm-3:40pm\***

\*Due to department policy, the final project due date cannot be changed for anyone under any circumstances. The final project must be given in order to pass the course.

## **Extensive Reading and Vocabulary Acquisition: How and Why EFL Countries Should Adopt this Practice**

Tamanna Mostafa  
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### **Abstract**

There have been a good number of research studies on how second language (L2) learners can acquire vocabulary through extensive reading, and different aspects of word knowledge have been in focus. There are also studies arguing that extensive reading can be beneficial only if it is supplemented with classroom activities for enhancing vocabulary knowledge. Through a review of relevant literature, this study investigates the impact of extensive reading on developing L2 learners' vocabulary proficiency in English as a Second Language (ESL) and English as a Foreign Language (EFL) contexts. Furthermore, as extensive reading demands quite untraditional roles on the part of teachers and learners, implementing extensive reading practices in EFL contexts is not easy. This study proposes some recommendations for successfully implementing extensive reading practices in Asian EFL contexts by taking into consideration the practical realities prevalent in most EFL settings.

In English as a Second Language (ESL) and English as a Foreign Language (EFL) contexts, reading is often the skill most emphasized. In extensive reading, learners are exposed to plenty of reading materials, which they choose themselves out of their own interests, and their "attention should be on the meaning, not the language of the text" (Day & Bamford, 1998, p. 5). The facilitative role played by extensive reading in enhancing learners' linguistic proficiency is well documented in literature (Brown, 2009; Davis, 1995; Hafiz and Tudor, 1989; Renandya, 2007). While learners in EFL/ESL contexts are usually more concerned with intensive reading, the practice of extensive reading can provide them with a whole new approach to reading that "develops good reading habits" (Day & Bamford, 1998, p. 6). Knowledge of vocabulary is a crucial aspect of L2 acquisition, and extensive reading can facilitate incidental acquisition of vocabulary in addition to developing learners' receptive and productive skills (Coady, 1997). In incidental vocabulary acquisition, learners encounter target words incidentally while reading a text with their focus on meaning, and any gain in word knowledge can be attributed to their reading (Horst, 2005).

A good number of researchers have focused on how L2 learners can acquire vocabulary through extensive reading, and different aspects of word knowledge (such as orthography, grammatical aspects, meaning, etc.) have been explored (Kweon & Kim, 2008; Pigada & Schmitt, 2006). Mason & Krashen (1997) provide additional support for the effectiveness of extensive reading through a series of experiments conducted in an EFL context. These studies show that the groups of Japanese university and college students, who took part in an extensive reading program for a specific period (e.g. one year/a semester), made "better gains than the regular students" who went through regular instructions during

the same time (Mason & Krashen, 1997, p. 95). However, there are arguments against the view that learners can attain considerable vocabulary proficiency through extensive reading, along with supporting studies (Laufer, 2003; Tudor & Hafiz, 1989).

Successful acquisition of vocabulary through extensive reading can be influenced by different variables such as learners' basic level of linguistic proficiency, presence/absence of pedagogical instruction, frequency of learners' exposures to target materials, types and comprehensibility of reading materials, and learners' level of motivation. Therefore, it is important for pedagogical practitioners in EFL/ESL contexts to be aware of how extensive reading is related to L2 learners' vocabulary acquisition and the conditions that can affect such acquisition. Through a review of relevant literature, this study investigates the impact of extensive reading on L2 learners' vocabulary acquisition and discusses the issues that pedagogical practitioners need to keep in mind if they are to use extensive reading practices for developing EFL/ESL learners' vocabulary proficiency.

Furthermore, as extensive reading demands quite untraditional roles on the part of teachers and learners, implementing extensive reading practices, especially in EFL contexts, is not easy. There are variables like time constraints, financial limitations, and exam-oriented education system that can further complicate proper implementation of extensive reading programs in EFL contexts. Therefore, this study also proposes some recommendations for successfully implementing extensive reading programs in EFL/ESL (especially in Asian) contexts.

## **L2 Reading Proficiency and Vocabulary Knowledge**

Proficiency in vocabulary is an essential component of L2 knowledge, as lack of vocabulary can hinder basic expression of meaning for L2 learners (Barcroft, 2004). Learners' ability to use L2 accurately is influenced by their processing of lexical input through repeated exposures to L2 over longer periods, and extensive reading can positively impact L2 lexical input processing by ensuring repeated exposures to target materials (Barcroft, 2004). Rott (1999) also argues that learners acquire vocabulary incidentally in the process of reading texts for "global comprehension" although SLA research is yet to determine the conditions or facts that influence incidental acquisition of vocabulary through extensive reading (p. 590). Coady (1997) maintains using extensive reading ensures incidental acquisition of vocabulary by L2 learners because "a great deal of L2 vocabulary is indeed learned through extensive reading," but L2 learners first need to build up a basic knowledge of more frequent vocabulary (p. 235). In this regard, Horst (2005) proposes that to acquire vocabulary incidentally and to guess meanings of unknown words from context, learners should not be unfamiliar with more than 5% vocabulary of a text. Therefore, it seems that L2 learners should be exposed to a range of simplified graded materials (rather than original texts) to facilitate their vocabulary acquisition through extensive reading. Similarly, Coady (1997) argues that beginner level learners need a threshold level of vocabulary (3000-5000 word families or 5000-8000 lexical items of high frequency rate) to guess the meanings of unknown words from contexts and thus, to improve their vocabulary through reading. Therefore, pedagogical instruction seems to be necessary for beginner level learners to improve their basic proficiency in comprehending and using those high-frequency words of 3000-5000 families so that they can develop automaticity "in their recognition, i.e., sight vocabulary" (Coady, 1997, p. 232). Likewise, Collins (2005) finds that beginner level learners' basic proficiency level in receptive skills helps them to learn more vocabulary than those with comparatively lower proficiency in receptive skills.

Additionally, Lee and Mallinder (2011) emphasize the “reciprocal” relationship between vocabulary skill and reading ability, as a learner with a stronger vocabulary base can have better comprehension level, which in turn motivates him/her to read more (p. 146). Beginner learners’ background experiences and interests should match their reading texts to facilitate their comprehension process and instigate their motivation; the more motivated learners are in the process of reading the better is their chance of increasing their lexical skills through extensive reading (Coady, 1997). Therefore, teachers can provide learners with additional vocabulary instructions to accelerate their comprehension of texts, which is an important factor for successful vocabulary acquisition (Lee & Mallinder, 2011).

Extensive reading can provide learners with exposure to enough comprehensible input that can facilitate their acquisition of new vocabulary (Krashen, 1989; Taguchi, Takayasu-Maass, & Gorsuch, 2004). Krashen (1989) is of the opinion that acquisition of vocabulary is associated with “the language faculty, the mental organ specialized for language,” which can effectively be activated when learners are exposed to enough comprehensible input in relaxed atmosphere, and conscious learning of vocabulary can only result in developing “a limited amount of ‘language like’ competence” (p. 454). Krashen (1989) thinks that learners should be exposed to as much L2 input as possible so that they can acquire the necessary competence in L2 skill areas including vocabulary and grammar because “more comprehensible input, in the form of reading, is associated with greater competence in vocabulary and spelling” (p. 441). Based on Krashen’s comprehensible input hypothesis, Day and Bamford (1998) advocate making plenty of reading material available to learners that is below their current proficiency level so that they can successfully acquire new vocabulary without being overwhelmed by too much complexity (as cited in Day & Bamford, 1998). This view is also shared by Elley and Mangubhai (1983) who assert that teachers should expose learners to “an abundance of high-interest, illustrated story books, printed in the target language” so that learners can develop their L2 vocabulary skills in a motivating, meaning-based environment that can “make L2 acquisition more like L1 acquisition and consequently facilitate the acquisition process” (p. 55). Thus, extensive reading of interesting and comprehensible materials can provide learners with the opportunity to acquire vocabulary skills in relaxed atmosphere — a goal that is not easy for them to achieve by any other means.

In research literature, as mentioned earlier, there is ample evidence of the efficacy of extensive reading in developing learners’ vocabulary skills. In Table 1, the findings of some experimental research studies are presented:

**Table 1. Extensive reading: Summary of experimental research studies**

Study	Target Population	Texts/Materials used	Experimental Design	Results
Kweon & Kim (2008)	12 Korean learners of intermediate proficiency level	Authentic unsimplified texts (target words: 367)	Pretest, ER Treatment (4/6 hours per day for 5 weeks), Posttest 1 (on the final treatment day), Posttest 2 (4 weeks after posttest 1)	Pretest < Posttest 1= Posttest 2 [Increase of nouns: 29% in Posttest 1, 26% in Posttest 2; verbs: 17% in Posttest 1, 19% in Posttest 2; adj: 18% in Posttest 1, 17% in Posttest 2]
Pigada & Schmitt (2006)	An intermediate level learner of French	Simplified reading materials (Target words: 70 nouns, 63 verbs)	Pretest (one-on-one interview and tests on knowledge of the target words) ER Treatment (one reader/week for one month) Posttest (one-on-one interview)	Learning was evident for 87 out of 133 target words (65.4%). The learner's improvement of scores in the posttest: 23% in spelling, 15.4% in meaning, 30% in grammatical aspects of nouns, 16.6% in that of verbs.
Rott (1999)	95 intermediate level learners of German as a foreign language	Six paragraphs (each 4-6 sentences long) for each of the 12 target words	Pretest Two treatment groups (each further divided into 3 groups based on different exposure frequencies: 2/4/6 times) Vocabulary recognition and production tasks were performed immediately after reading (acquisition), after 1 week (retention 1), and after 4 weeks (retention 2)	Significant gain of vocabulary knowledge for learners exposed to the target words 2,4, or 6 times in course of their reading. Learners' success was noted in retaining receptive word knowledge over 4 week period but not in productive word knowledge.
Horst (2005)	21 adult ESL learners from elementary to high intermediate level	35 Simplified graded readers	Pretest (containing 100 vocabulary items) Treatment (6 weeks long) Individualized posttests (each containing 100 items)	Knowledge of (on average) 10 vocabulary items was gained from pretest to posttest. Learners gained full or partial knowledge of 18 out of 35 words tested.
Cho & Krashen (1994)	4 Adult immigrants to the US of varied proficiency level (from low intermediate to advanced)	Books from Sweet Valley Kids Series (written at the 2 <sup>nd</sup> grade level)	No Pretest (except for one learner) Learners were asked to underline unknown words. ER Treatment: no specific time limit was set. Posttest	The percentage of learners' gain in vocabulary knowledge ranged from 56% to 80%. Use of dictionary proved to be fruitful.
Brown, Waring, & Donkaewbua (2008)	35 adult Japanese learners of English from pre-intermediate to intermediate level.	3 stories from graded readers (each appx. 5500 words long). 84 target words	Learners, divided in 3 experimental groups, were exposed to materials in three modes over 2 weeks period: reading only, reading-while-listening, and listening only. Posttest 1 (immediately after the treatment), Posttest 2 (1 week later), Posttest 3 (3 months later)	Most vocabulary acquisition occurred in the reading-while-listening mode (4.39 of 28 words) than in the reading-only mode (4.10 of 28). Vocabulary knowledge was mostly retained over 3 month period.

Table 1 delineates some empirical studies that document the beneficial effects of extensive reading on vocabulary acquisition. However, the studies also differ in terms of their scope and procedures. Kweon and Kim (2008) investigate how word frequency rate

and word classes (nouns, verbs, adjectives) are related to incidental acquisition of word knowledge through extensive reading of authentic literary materials by EFL learners in Korea. The target words (367 in total) are divided into three frequency groups depending on whether the occurrences are 20 or more, 7-19, or 1-6 (Kweon & Kim, 2008). As can be seen in Table 1, the learners' knowledge of vocabulary (including nouns, verbs, adjectives) "significantly increased" from pretest to posttest 1, and their learning is also retained in the posttest 2 (one month after the post test 1) (Kweon & Kim, 2008, p. 200). Moreover, nouns have significantly higher acquisition rate (29% in posttest 1) than verbs and adjectives (17% and 18% respectively in Posttest 1) (Kweon & Kim, 2008). Similarly, Pigada and Schmitt (2006) also find that nouns have higher acquisition rate than verbs (as can be seen in Table 1, the rate of improvement is 30% for nouns as opposed to 16.6% for verbs). According to Pigada and Schmitt (2006), as vocabulary knowledge is "incremental" in nature and as it has multifarious aspects (orthographic, collocation, grammatical, etc.), measurements of vocabulary knowledge should take such varied aspects into account rather than focusing solely on the semantic aspects and their study "adds a new dimension to extensive reading research by examining types of word knowledge other than meaning" (p. 5). Pigada and Schmitt (2006) find that among the aspects of vocabulary knowledge, learning rate is higher in case of spelling than in other aspects of word knowledge (as Table 1 shows, 23% improvement of spelling scores in the posttest as opposed to only 15.4% increase in the meaning scores). However, while Kweon and Kim (2008) find that learning rate is higher in case of the high frequency words than in the low frequency words, Pigada and Schmitt (2006) do not find any strong relationship between the word-frequency and the learning rate. On the other hand, Horst (2005) uses measures such as scanning, individual self-rating checklist, and word frequency profiling to ensure that any language gain after extensive reading can be attributed to the reading only and that such measures of vocabulary knowledge can be applicable to a large number of participants.. In Horst (2005) (as can be seen in Table 1), learners successfully acquire full or partial knowledge of 18 out of 35 words tested of which they had no knowledge during the pretest. However, unlike Kweon and Kim (2008) and Rott (1999), both of which include delayed posttests in the experimental designs, Horst (2005) cannot confirm if the vocabulary knowledge gained through extensive reading lasted for long, as there is no delayed posttest.

Moreover, frequency of exposure to target words is a crucial issue when it comes to acquisition of vocabulary through extensive reading. Unlike Kweon and Kim (2008) and Pigada and Schmitt (2006) (with the target population 12 and 1 respectively), Rott (1999) conducts the experiment on a large population sample (95) and similar to Kweon and Kim (2008), Rott (1999) finds a positive relationship between frequency of exposure and vocabulary learning rate. Similarly, Brown et al. (2008) argue that frequency of exposure is a necessary precondition for successful vocabulary acquisition and that vocabulary knowledge is likely to decay unless "the words are met a sufficient number of times and are met again soon after in subsequent reading or listening experiences" (p. 156). According to Brown et al. (2008), this 'sufficient number' is likely to be "considerably higher than seven to nine times for long term retention" (p. 156). However, Rott (1999) finds that while six encounters with the target words results in significant gain in productive and receptive word knowledge, four such encounters do not result in such an increase. Furthermore, learners' retention rate is found to be better in receptive word knowledge as is evident in the delayed

posttest than in the productive word knowledge (Rott, 1999). Thus, the relationship between frequency of exposure and vocabulary acquisition rate seems to be complex.

Additionally, as can be noticed in Table 1, the use of simplified graded materials is more commonly used by extensive reading researchers, which is in support of earlier discussion that to acquire vocabulary through extensive reading, learners need to be familiar with about 95% vocabulary of a text (Horst, 2005). By using graded texts, learners can be exposed to appropriate vocabulary based on their level of competence, as simplified graded materials are tuned to different proficiency levels. However, Rott (1999) uses tailor-made short paragraphs (as reading texts) for each target word, and it may be questionable whether reading such tailor-made paragraphs (each only 4-6 sentences long) can really give a learner the experience of extensive reading. On the other hand, Cho and Krashen (1994) acknowledge the beneficial effects of using a dictionary in acquiring vocabulary knowledge through extensive reading, and similarly, Grabe and Stoller (1997) argue that the practice of reading extensively and using a bilingual dictionary can lead to improved vocabulary skills as well as reading ability in an L2, especially when the L2 is not much different from the L1 (for example, Portuguese as L2 and English as L1).

However, the effect of extensive reading on development of learners' vocabulary skills can be varied, and in research literature, there are studies that cast doubts on the efficacy of extensive reading in this regard. Laufer (2003) questions whether it is really possible for L2 learners to increase their vocabulary knowledge through extensive reading that involves no explicit vocabulary instruction. Laufer (2003) presents arguments against the main theories ("noticing," "guessing ability," "guessing-retention link," and "cumulative gain") underlying the standpoint that learners can acquire substantial vocabulary knowledge in their L2 by only reading (p. 568-569). Laufer (2003) argues that it is difficult for L2 learners to notice or identify an unknown word as unknown, to retain the guessed meanings of unknown words, to guess or infer the meanings of unknown words from contextual clues, and to read any vast amount of texts in a short while to incidentally acquire word meanings. Laufer (2003) further compares the relative effectiveness of vocabulary gain from reading and from "word-focused activities" (p. 574). From the results of three experiments in each of which a group of learners participate in reading and another in vocabulary focused tasks such as sentence completion, sentence writing, and writing composition, it is clearly shown that "if a word is practiced in a productive word-focused task, its meaning has a better chance to be remembered than if the word is encountered in a text, even when it is noticed and looked up in a dictionary" (p. 581). Therefore, Laufer (2003) points to the paucity of research in extensive reading literature that experimentally investigates acquisition of particular vocabulary knowledge and emphasizes learners' superior gains in vocabulary knowledge after participating in specific word-focused activities than in reading tasks. However, the subjects in Laufer's (2003) experiments only participated in reading short texts, not in extensive reading of longer texts, and therefore, one might wonder whether extensive reading of longer texts would also yield similar results.

Likewise, Brown et al. (2008) find that learners' success rate in vocabulary acquisition is higher in reading-while-listening mode than in reading-only mode, and learners' overall success rate is not high in acquiring vocabulary knowledge after participating in extensive reading/listening activities. Similarly, Tudor and Hafiz (1989) analyze the kind of effects that exposure to graded reading materials can have on a group of ESL learners' (from the same L1 background) linguistic competence. They find that the range of learners'

vocabulary base does not develop after participating in the extensive reading program. Tudor and Hafiz (1989) attribute such findings to the simpler structures and limited vocabulary used in the graded readers. Therefore, the kind of input, which learners are exposed to in extensive reading, can also have an effect on development of their vocabulary skills. In this regard, pedagogical instructions/ activities can be another important factor. Min and Hsu (1997) find that secondary school Taiwanese EFL students who received vocabulary-related tasks along with reading texts outperformed those who only read texts (without receiving any vocabulary-focused activities) in attaining both productive and receptive knowledge of the target words after participating in the five-week long experiment. Therefore, according to Min and Hsu (1997), extensive reading can produce better results in learning vocabulary if such reading is supplemented with classroom activities for enhancing vocabulary knowledge. Similarly, Paribakht and Wesche (1997) compare the effectiveness of reading-plus-vocabulary instruction and “reading-only” treatments for intermediate level ESL learners from diverse L1 backgrounds (p. 187). They find that although in both the treatments learners have successful vocabulary acquisition, they have “significantly greater gains” in reading-plus-instruction treatment than in reading-only treatment (Paribakht & Wesche, 1997, p. 188). Paribakht and Wesche (1997) argue that vocabulary exercises following reading texts ensure greater cognitive processing of the target words than repeated exposure to target words only through reading, and such cognitive processing can lead to higher levels of vocabulary knowledge beyond the level of simple recognition. Similarly, while attesting to the fact that “vocabulary enhancement techniques” along with reading can lead to better vocabulary knowledge, Rott (1999) also mentions some factors that influence learners’ ability to guess unknown word meanings while reading, such as contextual clues, learners’ knowledge of the structural properties of words, and their “awareness of and attention to” unknown vocabulary (p. 592-593). Similar to Min and Hsu (1997), Grabe and Stoller (1997), and Paribakht and Wesche (1997), Rott (1999) also argues for providing learners with access to a dictionary or “post – reading vocabulary activities” to facilitate their inferring the meanings of unknown words and thus, to strengthen their vocabulary knowledge (p. 593). Likewise, Collins (2005) thinks that explanation of new words can help L2 learners of any proficiency level to learn new vocabulary. In similar vein, Laufer (2003) also argues for incorporating word-focused activities in ESL/EFL courses rather than relying solely on extensive reading activities for increasing learners’ vocabulary knowledge.

To sum up, research has shown that extensive reading has positive effects on developing learners’ vocabulary skills (Elley, 1991; Grabe & Stoller, 1997; Kweon & Kim, 2008; Lao & Krashen, 2000; Pigada & Schmitt, 2006; Rott, 1999). The more learners are exposed to comprehensible input the better is the chance that they will be motivated to read more, which can ultimately strengthen their vocabulary skills by ensuring frequent exposures to target words. However, there are some caveats. Learners need to have a basic level of linguistic proficiency (3000-5000 word families or 5000-8000 high frequency lexical items) to comprehend reading texts or to guess meanings of unknown vocabulary while reading extensively (Coady, 1997). It also becomes difficult for learners to guess the meanings of unknown words in the absence of any textual clue (Paribakht & Wesche, 1997). Similar to Laufer (2003), Bensoussan and Laufer (1984) also argue that ESL learners often use their schema rather than contextual clues to guess meanings of unknown vocabulary, which might lead to wrong guesses, and in most cases, ESL learners tend to ignore an

unknown word rather than making a guess. Therefore, it might be important for beginner level learners to acquire a basic level of proficiency in using highly frequent lexical items before they can be engaged in extensive reading to develop their vocabulary skills. The beneficial effects of using a dictionary while reading extensively are also acknowledged in research literature (Cho and Krashen, 1994; Grabe and Stoller, 1997). Furthermore, as argued by Paribakht and Wesche (1997) and Min and Hsu (1997), extensive reading practices should be supplemented with related pedagogical instructions or exercises to engage learners in high level of mental processing to strengthen their vocabulary skills. The use of an appropriate assessment technique could also prove to be crucial in judging learners' actual gain from extensive reading activities. For example, Brown et al. (2008) find that a multiple choice test is more effective in assessing minute details of learners' vocabulary knowledge (including "partial knowledge") than a meaning-translation test (p. 156). Moreover, to increase vocabulary knowledge through extensive reading, learners need to be exposed to multiple reading materials on a regular basis, as only a brief exposure to extensive reading is not likely to be beneficial in this regard (Brown et al., 2008; Kweon & Kim, 2008; Rott, 1999). And here is where it becomes challenging for the educational practitioners in EFL contexts who may have to accommodate extensive reading practices within a variety of constraints imposed by their academic curricula.

### **Implementation of Extensive Reading Practices in EFL/ESL contexts**

As the multifarious benefits of extensive reading in increasing learners' vocabulary skills are well established in the literature, the question arises as to the status of extensive reading in the EFL/ESL settings all over the world. Day and Bamford (1998) mention that "reading is its own reward" in extensive reading with "few or no follow-up exercises" (p. 8). However, trying to implement such extensive reading practices in the ESL/EFL contexts might be difficult because of different socio-economic and educational contexts prevailing there. Robb (2002) argues that concepts like "learners choose what to read" or "self-motivated learning" might be difficult to implement in non-Western contexts, especially in Asian countries, as Asian learners are more inclined to be engaged in other extra-curricular activities rather than reading for pleasure.

On the other hand, Macalister (2008b) elaborates on the successful implementation of extensive reading practices in the advanced English for Academic Purposes (EAP) settings of New Zealand. Macalister (2008b) argues that the exact nature of extensive reading practices in a program should be "determined by the specific language learning environment" (p. 23). Thus, contextual factors play important roles in deciding the "exact nature of any extensive reading program," and such a program should be "flexible" enough to adapt to the needs of a particular learner group (Macalister, 2008b, p. 31). Furthermore, Davis (1995) discusses the characteristics of successful extensive reading programs in the secondary school systems of Singapore and Cameroon. In Cameroon, the extensive reading program has to be accommodated within financial constraints as opposed to that in Singapore. The successful implementation of the extensive reading program in Cameroon shows that "even without the luxury of donated book boxes or book baskets, it is quite possible for the teacher to set up an extensive reading program, tailored to the needs of his or her pupils" (Davis, 1995, p. 333).

Apart from these success stories, it has not been easy to implement extensive reading projects in many cases where those projects lack specific purposes or do not integrate with the mainstream curricula. Green (2005) investigates the reasons for the failure of Hong

Kong Extensive Reading Scheme, which was initiated in the secondary schools of Hong Kong in the early 90s. According to Green (2005), the reasons of this failure include the “undifferentiated and top-down manner” in which the scheme was applied in Hong Kong (p. 308). Moreover, lack of teacher training and motivation, lack of integration of the scheme into other elements of the curriculum, an exam-oriented education system, and lack of definite purposes all contributed to the failure of this scheme in Hong Kong (Green, 2005). On the contrary, Macalister (2008a) shows through the results of an action research project in New Zealand that extensive reading practices can be successfully implemented in an EAP program intended for pre-university level ESL learners. An interesting fact is that this action research project is similar to the Hong Kong extensive reading scheme described by Green (2005); in both cases, extensive reading is not integrated to other parts of the curriculum but is implemented more as an isolated unit. However, in the New Zealand EAP program, as opposed to that in the Hong Kong scheme, the teachers are motivated and trained to practice extensive reading effectively in the classroom, and the learners can also see “the reading as contributing towards their language learning needs” (Macalister, 2008a, p. 255). Differences like these might have contributed to the success of extensive reading project in New Zealand and failure of it in Hong Kong. Such facts underscore the need for training and motivating teachers for developing appropriate extensive reading programs while keeping in consideration the particularities of specific contexts (Macalister, 2008a).

Therefore, despite the success of extensive reading practices in a number of ESL/EFL contexts, many problems inherent in such contexts may hinder the successful implementation of these programs. Day and Bamford (1998) sum up some difficulties associated with the implementation of extensive reading practices in EFL countries, including scarcity of necessary funding, lack of time for free reading in classroom, untraditional roles of teachers, dominance of skills-based approach in classroom pedagogy, and the kind of attention and organization required for setting up such a program. In this regard, some recommendations are offered below that can facilitate successful implementation of extensive reading practices in EFL contexts.

## **Recommendations**

### *Effective Teacher Education*

For successful implementation of extensive reading practices in EFL contexts, teachers need to be aware of the benefits of extensive reading and how it can be integrated in classroom pedagogy. In this regard, effective pre- and in-service training can be arranged for EFL teachers who will thus get an opportunity to update their knowledge and beliefs about effective learning. Macalister (2010) argues that the nature and benefits of extensive reading requires “greater emphasis in language teacher education” because of the lack of necessary awareness and knowledge among teachers in this area (p. 69). According to Macalister (2010), teachers’ beliefs, attitudes, and knowledge based on previous education and professional experiences contribute to teacher cognition that directly influences classroom practices. Teachers need to be aware that they can assume such novel roles in classroom like “the model of a language learner” by practicing extensive reading themselves so that students can also be encouraged to be engaged in this type of reading (Macalister, 2010, p. 69). Hence proper pre-service and in-service teacher education programs need to be arranged for teachers in EFL countries so that they can be well prepared to integrate extensive reading activities in their classroom practices.

### *Training for Administrators and Authorities*

Not only teachers but also administrators or authorities of educational institutions need to be aware of the importance of extensive reading in increasing the linguistic proficiency of EFL learners. In most EFL contexts in the Asian countries, the focus in classroom contexts is on teaching all the four skills rather than on spending much time on any one skill (Robb, 2002). Therefore, appropriate training needs to be arranged for authorities or administrators of educational institutions to make them realize that the practice of extensive reading can have multiple beneficial effects on learners' linguistic development; then, they might be more willing to accommodate such reading practices in their class schedules (Davis, 1995).

### *Integration to curriculum*

In order to gain acceptability in EFL contexts, extensive reading needs to be integrated into curricula. In the majority of Asian EFL contexts, the education system is exam-oriented, and extensive reading practices will be pushed in a corner if such practices are not directly integrated to the overall curricula. Green (2005), Grabe (2009), and Macalister (2010) argue for integrating extensive reading practices into curricula so that learners have sufficient motivation for engaging in this type of reading. Green (2005) proposes that if extensive reading is part of a curriculum, such as a task-based one, then the drawback often associated with extensive reading that it fails to "provide a clear learning purpose for learners" can be withdrawn (p. 309). Green (2005) argues that "extensive reading incorporated in a task-based approach acquires purpose automatically by becoming a key component in gathering information on a topic or as input to solving a problem" (p. 309). Grabe (2009) also mentions a list of recommendations for including extensive reading activities in a reading curriculum, for example, providing adequate in-class time for reading and making attractive reading materials available to learners. According to Grabe (2009), "time constraints" is the most frequent reason for extensive reading programs being ignored in L2 educational contexts (p. 326). Likewise, Macalister (2010) is of the opinion that if extensive reading is part of a reading course, then courses should allow sufficient in-class time for reading and interaction among students. According to Day and Bamford (1998), "finding time for extensive reading is a matter of priorities" (p. 47). If teachers and authorities concerned want their students to be "fluent, independent readers in the second language," then they will definitely be able to manage some time for extensive reading "even if it is only an hour of homework a week" (Day & Bamford, 1998, p. 47). Furthermore, textbooks can also help overcome concerns about the "legitimacy" and "practicalities of setting up an extensive reading program" because "textbooks are powerful legitimizing tools, for teachers, for learners, and for institutions" (Brown, 2009, p. 240). Therefore, textbooks can inspire learners to engage in extensive reading by, for example, recommending appropriate and interesting books for them, including reading logs or flowcharts for monitoring students' reading, incorporating activities for motivating learners to discuss their reading, and including excerpts from the graded readers "to give students a taste of extensive reading" (Brown, 2009, p. 242). Thus, if textbooks can encourage extensive reading activities directly or indirectly, it will become easier for the authorities concerned to include such activities in a curriculum.

### *Consideration of Contextual Factors*

Contextual factors and constraints, for example, students' and parents' expectations, need to be taken into account while designing an extensive reading program in an EFL context. According to Macalister (2010), contextual factors influence, to a great extent, teachers' attitudes and beliefs on the one hand and their classroom practices on the other. In many EFL contexts such as in Bangladesh, the focus is mainly on teaching the productive and receptive skills in class, and parents, who usually have to pay fees for their children's education, expect their children to be taught the "skills" rather than reading interesting materials for pleasure. Therefore, steps should be taken for raising the awareness among students and parents about the beneficial effects of extensive reading (Day & Bamford, 1998). Moreover, in many EFL (especially in the Asian) countries, a teacher is viewed as the giver of knowledge, and the main role of a student is that of the receiver. In such contexts, extensive reading practices, where "the primary activity of a reading lesson should be learners reading texts" and "teachers must learn to be quiet," can instigate resistance among both teachers and learners (Day & Bamford, 2002, p. 136). Robb (2002), while describing the educational reality of Japan, questions the applicability of Day and Bamford's (2002) proposed principles of extensive reading in the Asian contexts. Therefore, while implementing extensive reading practices in EFL contexts, teachers should take into consideration the practical realities and should aim for feasible goals. For example, if EFL learners need teachers' assistance in choosing or comprehending a reading text, then teachers should assist them rather than being "quiet" in the classroom (Day & Bamford, 2002).

### *Devising Proper Assessment Methods*

Educators in EFL countries should also think of how to assess learners' extensive reading so that students can relate their extensive reading practices to their broader goals of language learning and can perceive real purposes for doing such pleasure reading. Macalister (2010) thinks that as part of a reading program, extensive reading needs "to be linked to assessment as a means of ensuring its acceptability to various stakeholders" (p. 71). Day and Bamford (1998) offer some suggestions for teachers to keep track of and evaluate learners' extensive reading; for example, students can be asked to keep their own "reading notebook," "weekly reading diary," or "book reports" (p. 87). Teachers can also use other alternative measures of assessing learners' progress in extensive reading; for example, learners can be asked to write down their opinions or feelings about books on comment cards and attach those to their individual portfolios. Thus, teachers need to find a "valid and reliable assessment tool that did not turn extensive reading into a chore" (Macalister, 2010, p. 71).

### *Avoiding Financial Constraints*

In many EFL countries, for example, in Bangladesh, lack of adequate funds can be an issue because buying books for setting up an extensive reading scheme costs money. With careful planning, school authorities can ensure that financial constraints would not be an issue in this regard. For example, attempts can be made to manage grants from international organizations that, in many cases, have funds available for facilitating educational advancement in EFL countries. Davis (1995) discusses how it was possible in Cameroon to set up the "cheapest possible extensive reading programs, which schools can implement themselves with the minimum of input" (p. 332). In Cameroon, only one set of

books was given to a school for an entire year, and that set was supposed to be used by all the classes in turn with the hope that the success of this scheme would encourage the school authority to invest more money and effort in implementing such a beneficial project (Davis, 1995). Day and Bamford (1998) also support the idea of starting an extensive reading program on a small scale if money is the issue. Moreover, if a school has a library nearby, then the library can also be used as a valuable resource provided the library authorities agree to collaborate.

### *Roles Teachers Can Play*

For the success of any extensive reading program, teachers need to make the experience entertaining and motivating for learners. Teachers need to carefully explain the purpose and methodology of extensive reading practices and emphasize that learners' focus in this type of reading should be on their enjoyment and overall comprehension of texts, not on analyzing linguistic features. Bell (1998) argues for the use of "multimedia sources" like "video, audio, CD ROM, [and] film" to make extensive reading experiences more entertaining for EFL learners (n. p.). In this regard, Bell (1998) also mentions some other measures that teachers can use, for example, making arrangements for learners to watch film-adaptations of popular books, utilizing library resources, inviting visiting speakers, and telling interesting stories related to popular books. Day and Bamford (2002) are of the opinion that teachers, if necessary, should guide students in making their choices of reading texts because EFL learners, accustomed to the teacher-centered education system of EFL contexts, might be lost if they are asked to choose reading texts on their own. Day and Bamford (2002) also emphasize that in an extensive reading classroom, teachers should read with students because "effective extensive reading teachers are themselves readers," as they should assume the "attitudes and behavior of a reader" (p. 140). Therefore, a teacher should be the role model of an avid reader to learners.

### *Involving Students*

In a successful extensive reading program, students should be involved and interested in reading books for pleasure, and those books also need to be motivating. Bell (1998) argues for involving learners in the management of extensive reading programs so that they can form "a strong sense of ownership" of the program (n. p.). For example, in the successful implementation of extensive reading program in the EFL context of Yemen, the learners were given the chance to make short in-class oral presentations on the books read, and thus, they could exchange their views with their classmates (Bell, 1998). Moreover, those learners chose many of the books on the basis of their classmates' recommendations apart from their own choices. The success of the Yemen program prompts Bell (1998) to assert that if teachers can instill in learners necessary motivation, involvement, and sense of belongingness to an extensive reading program, it can eventually promote "student independence and autonomy," and the program can achieve "a direction and momentum governed by the learners themselves" (n. p.).

In conclusion, we can wonder with Grabe (2009), "how much evidence is needed to make the case for extensive reading!" (p. 328). The beneficial effects of extensive reading on developing learners' vocabulary skills can provide necessary impetus to educators in EFL contexts to implement extensive reading practices sincerely. Regardless of the contextual constraints, EFL teachers need to be aware of the linguistic benefits of extensive reading, and they should take necessary steps to integrate such reading in their academic curricula if

only to give their learners a feel of how motivating and beneficial an activity extensive reading is.

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# **‘Food for Thought’<sup>1</sup> When Working with Those ‘Hungry for Success’<sup>2</sup>**

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## **Abstract**

Current research is investigating the impact of micronutrient deficiency on both learning in general and language learning specifically, in both developed and under-developed countries, in hopes of addressing the learning needs of all children. This paper provides a brief overview of research studies investigating the impact of micronutrients on learning, including immigrant, migrant, and internationally adopted populations; explores some current school programs addressing the growing problem of poor nutritional status and its impact on learning; and concludes with ideas for designing culturally appropriate, healthy meals with readily available ingredients. Students and their families are hungry for success; sometimes, the solution might be on their dinner plates – food for thought for teachers.

## **Introduction**

With all that must be considered when teaching, one rarely thinks of food and its impact on learning. Yet, with technological advances such as functional magnetic resonance imaging (fMRI), the impact of nutritional status on cognition, memory, and learning can now be seen neurologically (Kishiyama, Boyce, Jimenez, Perry, & Knight 2008; Miller, 2005). This has spurred increasing numbers of studies exploring the impact of micronutrient deficiency on both learning in general and language learning specifically, in both developed and under-developed countries (Bryan et al., 2004; Gewa et al., 2009; Spencer, 2008;), in the hope of addressing learning needs in all children. Specific to Teaching English to Speakers of Other Languages (TESOL), Krashen and Brown (2005) discuss an array of external (e.g., parental interaction styles, access to print) and internal (e.g., nutrition, physiology) factors that can impact language proficiency, which, in turn, impacts test performance in reading and math. Though we, as teachers, have little control over much in our students’ lives, we *can* educate ourselves, our students, and their families on the beneficial and detrimental effects of nutrition on learning, and we *can* work for greater access to high quality, nutrient dense foods – reasonably priced and Women, Infants, and Children (WIC) supported – at school and in the community. Such help is needed by many immigrants as they adapt to cultural dietary differences (Garcia-Lascurain, Kicklighter, Jonnalagadda, Boudolf, & Duchon, 2006) and by migrant families as well (Leon, 1996; Rochin, Santiago, & Dickey, 1989). Since these are populations that fall under Title III of the Elementary and Secondary Education Act (ESEA), nutrition education might be an option for parent programs in the K-12 settings. (For funding information under ESEA, see *Implementing RTI Using Title I, Title III, and CEIS Funds: Key Issues for Decision-makers* by the U.S. Department of Education.)

In order to help students and their families, however, it is first important to have a basic understanding of several nutritional elements along with an idea of how the brain processes language. Regarding nutrition, a common confusion is that of macronutrient vs. micronutrient. Macronutrients include protein, carbohydrates, and fats, while micronutrients refer to vitamins and minerals. Those at and below the poverty line are often deficient in both macro- and micronutrients. Those of affluence, not surprisingly, have a diet that is macronutrient dense, especially in animal protein; however, their diets are often micronutrient poor (Ells et al., 2008). Yet again, why is this important for teachers? The answer, especially for those with English language learners, is due to the populations we find in our classrooms: immigrant students from lesser developed countries and refugees from countries in turmoil who have experienced extended amounts of time with limited access to high quality diets (Garcia-Lascurain et al., 2006); students from migrant families (Leon, 1996; Rochin, Santiago, & Dickey, 1989); and students from urban centers with low socioeconomic status. These are all populations that may have experienced especially significant micronutrient deficits. In fact, only 14% of U.S. students meet the recommended guidelines for fruit and 20% for vegetables (Story & Neumark-Sztainer, 2005), the very foods that contain vitamins and minerals. It is also important to keep in mind that the least expensive foods, which are also most accessible, are the most micronutrient poor, though often being macro-nutrient (simple carbohydrates and unhealthy fats) dense. This point becomes especially relevant when thinking of recent immigrants who tend to fall into one of two groups: those that try to hold on to their culture through traditional foods which may not be as readily available and, hence, of higher cost, and those that try to acculturate, often under pressure from persuasive commercials on television and other media, to the typical western diet which is now being documented as micronutrient poor. The impact of all of this is happening sight unseen, through the effect on brain development and functioning. Before looking at the studies that explore the impact of micronutrients on cognitive function, it is first important to have a brief tutorial on how the brain functions.

### **Tutorial<sup>3</sup>**

The brain is divided into two hemispheres, with each hemisphere further divided into four lobes. The temporal lobe is involved in perception of auditory stimuli, an area needed in order to comprehend language. The occipital lobe is responsible for vision, a critical element in highly literate cultures where visual language in the form of reading is needed. An area that is involved with both perception and production of language to a lesser degree is the parietal lobe, while the frontal lobe is where the greatest processing of language, along with higher order critical thinking skills (e.g., higher levels within Bloom's taxonomy), occurs. The frontal lobes are the seat of what has been termed *executive functions*: "planning, developing strategies, testing hypotheses when problem solving, focusing attention, inhibiting irrelevant stimulation, and collating memories" (Bryan et al., 2004, p. 295-296), the very skills with which teachers are all too familiar as being critical for optimum classroom functioning.

Other areas include the auditory cortex where auditory signals are received, identified, and processed into a form useful for other areas of the brain; the visual cortex where similar processes occur for visual images, again, critical for highly literate societies; and the motor cortex where signals are sent to the muscles responsible for speech. Two areas specific for language include Broca's area which focuses on the production aspect, not only organizing patterns of articulation for speech, but controlling aspects of language as

well, such as inflectional morphemes and function words<sup>4</sup>; and Wernicke's area which focuses on perception, including comprehension at the word and sentence levels, along with retrieval of words from the mental lexicon. Connecting these two areas in order to facilitate communication between brain regions is a bundle of nerve fibers termed the arcuate fasciculus, while the angular gyrus transforms visual stimuli into auditory form (and the reverse), a fundamental process needed for reading and writing.

An example of how the above works is that of word production: Wernicke's area is triggered to interpret and retrieve the needed word from the mental lexicon; the arcuate fasciculus then sends the phonetic data for the word on to Broca's area where it is interpreted, and then articulatory material is sent on to the motor cortex which is responsible for leading muscle movements in the actual articulation of the word. Similar complex processing sequences occur for perception of a word as well as reading a word. For all of these processes to work, micronutrients are crucial for the development of neurons, their myelination, and their ability to transmit needed information – all in order to understand language, produce language, and think critically.

### **Review of Literature**

Studies investigating the effect of micronutrients on brain functioning are yielding interesting findings. Nutrition has been found to affect 1) the brain's macrostructure (development of the brain), 2) the brain's microstructure (myelination of neurons), and 3) the operation of neurotransmitters, all of which can affect brain function (Bryan et al., 2004). A critical period has also been found that occurs within the first two years, though some areas, including the frontal lobes, continue to develop into adulthood (Bryan et al., 2004). In studies, supplementation of vitamins, minerals, and/or essential fatty acids (e.g., iodine, iron, folate, zinc, vitamin B12, selenium, and omega-3 polyunsaturated fatty acids) for at least three months has shown positive results for beneficially impacting nonverbal IQ, cognitive abilities, learning, and behavior, with especially promising results for those with learning disabilities such as dyslexia, attention deficit hyperactivity disorder or symptoms, and autism, as well as those of lower socioeconomic status (SES) (Bryan et al., 2004; Frensham, Bryan, & Parletta, 2012). In addition to various vitamins and minerals noted above, "dietary-derived flavonoids have the potential to improve human memory and neuro-cognitive performance via their ability to protect vulnerable neurons, enhance existing neuronal function and stimulate neuronal regeneration" (Spencer, 2008, p. 238). These flavonoids that impact both learning and memory include: flavonols (e.g., onions, leeks, broccoli); flavones (e.g., parsley, celery); isoflavones (soybeans, soya products); flavanones (citrus, tomatoes); flavanols (green tea, red wine, cocoa); and anthocyanidins (red wine, berry fruits) (Spencer, 2008). The above studies are just a few of the rapidly increasing literature on micronutrients and brain functioning. While waiting for more lab-based information, it can be beneficial to turn to existing studies involving children's performance in schools. What follows is a brief overview of studies representing different populations: children from rural settings in less-developed countries, internationally adopted children from orphanage settings, children from developed countries, and children within developed countries, though of lower SES.

Looking at school children in rural Kenya, Gewa et al. (2009) were part of the Child Nutrition Kenya Project, a two-year longitudinal, randomized, controlled feeding intervention study. They found that the micronutrients iron, zinc, B12, and riboflavin showed a statistically significant positive relationship with cognitive test scores using

Raven's Matrices, a nonverbal IQ measure. They also found statistically significant positive measures of zinc, B12, and riboflavin on digit span scores which are measures of memory. Thus, supplementation of micronutrients appears promising in the population of children from less developed countries who may not be obtaining the optimum level of micronutrients. Turning to internationally adopted children, Miller (2005) discusses the need for various nutrients in relation to supporting neurotransmitters which, in turn, are important for language development, vocabulary acquisition, cognitive development, and social contact skills, among others. Micronutrient deficiencies are common in children in institutional settings, as well as in less developed countries, and can occur without malnutrition; that is, the macronutrient density may be high, especially refined carbohydrates and fats, yet the micronutrient density may be too low for proper brain growth and functioning, which, then, negatively impacts school functioning and behavior. Miller emphasizes that even with adequate diet later, early micronutrient deficiency can have long-lasting effects.

Though it is not surprising that children might fare poorly in situations where there is limited access to micronutrient-rich diets, it would appear that those children with ready access to an abundance of food in more developed countries would fare better. To investigate this, Ells et al. (2008) conducted a meta-review of published studies that had investigated children in the UK and other developed countries. As is often the case with meta-analyses, due to the differing methodologies and analytical measures across a wide range of studies, they found inconclusive evidence for any detrimental effect of a lack of nutrients on learning. (See Hughes and Bryan [2003], along with Isaacs and Oates [2008], for in-depth discussions of assessment challenges in this line of inquiry.) However, they did find emerging evidence across the studies regarding the importance of fatty acids, an area for further research. Though children in developing countries do not appear to have the same degree of risk as those in lesser-developed countries, this does not hold true for those of lower SES. In a longitudinal study conducted in the UK, Feinstein et al. (2008) found that poorer eating habits at age three years resulted in lower scores on standardized tests taken in later years. This emphasizes Miller's (2005) caution that early deficiencies may not resolve over time. In the U.S. (Richmond, VA area), Vieweg, Johnston, Lanier, Fernandez, and Pandurangi (2007) also found areas of concern in children grades kindergarten through high school. Not only was there the question of micronutrient poor diets, but children of lower SES were at high risk of developing obesity. This was due to the higher cost of micronutrient dense foods vs. inexpensive refined carbohydrates and fats, as well as the extent to which local groceries carried healthful food choices, an issue of access.

Turning more specifically to second language learners, it can be seen that access to micronutrient-dense diets, both logistically and financially, can be problematic, in addition to the issue of acculturation. As early as the 1980's, Rochin et al. (1989), in a needs analysis of migrant workers in Michigan, found that nutritional support and services ranked fourth out of the eleven areas of greatest need. A decade later, Reicks (1996) studied migrant farmworkers, mostly Latino, in Minnesota. He found that although children knew high sugar foods were unhealthy, they did not understand the health risks of high fat foods. Of greater concern was the "lack of economic resources of migrant families to purchase higher priced fruits and vegetables" (p. 2) which is sadly ironic in that it is often migrant workers who ensure that the population as a whole has access to these foods. In Michigan, a study by Leon (1996) found similar results: migrant farmworkers experienced a high prevalence

of poverty, poor nutrition, and chronic illness that negatively impacted their children's ability to succeed in school. Leon also found high obesity rates and high consumption of fats, inexpensive macronutrients useful for energy, but offering little in nutrition. (For further information specific to educating children of migrant workers, see Green, 2003.)

The above problems are not confined to the migrant population. Immigrants in general are faced with nutrition problems they had not anticipated. Garcia-Lascurain et al. (2006) argue that the rapid growth of minorities in the U.S., especially with immigrant families adopting new cultural practices including foods, is cause for concern due to a negative impact on their health. Many studies have noted the greater prevalence of obesity among ethnic minorities (Dietz & Gortmaker, 2001; Ogden, Flegal, Carroll, & Johnson, 2002; Popkin & Udry, 1998), which in turn is related to cardiovascular disease and type-2 diabetes, as well as the cascade of other diabetes-associated health diseases (U.S. Department of Health and Human Services, 2001). Garcia-Lascurain et al. further argue that acculturation may lead to the adoption of unhealthy dietary patterns, e.g., high fat diets and low fruit and vegetable consumption, a point supported by Satia-Abouta, Patterson, Neuhouser, & Elder (2002). Because of these concerns, Garcia-Lascurain's group was involved with the Nutrition Education for New Americans (NENA) refugee afternoon program in tandem with others at Georgia State University. This program attempted to teach third to fifth graders (ages 9-12 years) about nutrition; however, results were mixed as to its success. Future programs might be more successful if the focus were on specific foods, rather than more technical nutrient names; if food images were provided, especially for those students of limited English proficiency; if information were contextualized to sample meals and snacks; and if the period of instruction were increased beyond one 50-minute session (Contento et al., 1995, found that a minimum of 50 hours of instruction is needed in order for change to occur). Sussner, Lindsay, Greaney, and Peterson (2008), though having the same argument as that presented by Garcia-Lascurain's group, namely that "exposure to obesogenic environments in U.S. may foster development of overweight in immigrants with greater acculturation" (p. 497), examined the situation encountered by immigrant adults in contrast to refugee children. In a program with 51 Latina mothers in Boston, the women, in comparing lifestyles between their native countries and the U.S., were most concerned about the macroculture diet, food quality, and food availability; food and eating practices; breastfeeding practices; and belief systems regarding food and child rearing, among others.

At this time, the literature points to several problems that need to be addressed. First, there are several populations of learners that are at increased risk of experiencing micronutrient deficiencies – currently or in the past (which, remember, exert residual effects) – due to environmental, economic, and political circumstances: recent immigrants, refugees, migrant families, internationally adopted children, and those of lower SES in general. Second, there is the intertwined problem of retaining the home culture, including dietary patterns, vs. acculturating to the macroculture, including a western diet. Those who seek to hold to the home culture and diet encounter two problems: access to familiar foods, and, if accessible, often the higher cost of such foods, making them economically unfeasible. For those who acculturate to the western diet, there is now the problem of increased refined carbohydrates and fats (macronutrients) with low consumption of critically needed fruits and vegetables (micronutrients), again often due to limited access and/or cost. The question that begs asking, then, is: What can teachers do to help ameliorate these problems?

## What Teachers Can Do

There are several ways in which teachers can advocate for increasing the micronutrient density of their students' diets that, in turn, would have beneficial effects on their learning. Three possible ways include becoming involved in legal mandates at the state level, implementing school nutrition programs, and designing instructional gardens.

Looking first to legal mandates, California is a state leading the way with a declared belief that "Nutrition is an essential building block for student success" (California Department of Education, 2009, para. 1) as evidenced by its 1995 *Garden in Every School Initiative*. Since this goal was formally stated, California has passed several bills exemplifying its commitment to the interface of education, activity, and food through school gardens: Assembly Bill 1014, *Instructional School Gardens* (1999); Senate Bill 19, *Pupil Health, Nutrition, and Achievement Act* (2001) which identified school gardens as a way to increase student consumption of fruits and vegetables; Assembly Bill 1634, *Nutrition Education* (2002), which supported school gardens as best practice; and Assembly Bill 1535, *California Instructional School Garden Program* (2006), which authorized the California Department of Education to award \$15 million in grants with the purpose to promote, develop, and sustain instructional school gardens. Six years later, Hazzard, Moreno, Beall, and Zidenberg-Cherr (2012) conducted a study to evaluate the success of this last bill. They found that less than 40% of the schools receiving an award were able to achieve all of their predicted goals, and almost 38% of recipient schools were negatively impacted by the California budget deficit in their ability to carry out their proposed school garden. Thus, schools reported problems in implementation due to 1) the budget shortfall of the state, and 2) insufficiency of the grant award amount. It is important, though, to keep in mind that between the passage of the bill in 2006 and the evaluation of its potential success, the U.S. went through a significant recession, with the state of California being especially negatively impacted. Even through this difficult economic time, many programs across the state *were* successful, though at a less than predicted level. In order to address both potential state shortfalls as well as additional funding needed in order to meet all goals, Hazzard et al. suggest supplementing state funds with grants from private companies. An example would be *Youth Garden Grants* from The National Gardening Association in partnership with Home Depot. This would decrease the inherent risks of relying on only one funding source especially in turbulent economic times. The situation in Michigan is less clear and does not appear to have the prominence nor priority that nutrition and instructional school gardens have in California. Michigan House Bill 4180 (2011) considers requiring instruction regarding diet and health to students in grades 3-12, while House Bill 5655 (2012) charges the Department of Education to develop and maintain a nutrition and physical activity best practices database. Note that while both of these have been referred to the Committee on Education, neither come close to what California advocates.

A second way that teachers can advocate for better micronutrient nutrition for their students is by implementing curricular nutrition programs. One such program is *The Nutrition Detectives Program*, developed by Katz (2006, 2008) and reported in Katz et al. (2011)<sup>5</sup>. Almost twelve hundred students in Missouri, grades 2-4, were divided into intervention and control groups. The intervention groups received four mini-lessons in the fall and one in winter, for a total of less than two hours of instruction. The goals were to read food labels, detect marketing deceptions, and identify and choose healthful foods. Results of this study indicated that the children in the intervention groups had significant

improvement in nutrition label literacy; however, their own total caloric, sodium, and sugar intakes did not decrease, nor did their body mass index change. In other words, students did not transfer nutrition label literacy into actual application to their own eating patterns. Once again, it can be seen that short periods of instruction and time do not result in needed change. A “quick fix” is not possible when trying to counteract media marketing and macrocultural dietary patterns. Other in-school programs that may be of interest include *CATCH* (Perry et al., 1997), *Planet Health* (Gormaker et al., 1999), and *We Can* (Nansel et al., 2008). Alternatively, nutrition programs could be interwoven into the regular curriculum or even have their own curriculum in order to address the need for long-term instruction to affect permanent change in dietary patterns. Repeated information throughout other curricular areas may be more beneficial at the elementary level, whereas at the high school level specific classes in nutrition, along the lines of resurrected and modernized home economics classes for *all* students, might have the greatest impact long-term.

Finally, school garden programs can offer students opportunities to engage first-hand with nutritional concepts, health, environmental issues, and sustainability. Thomas Dewey, years ago, stated “All you really need for education is a library and a garden” (as cited in Harrison, 2008/2009, p. 24). An interesting instructional garden program, especially for teachers of second language learners, is *Green Thumbs Growing Kids*, taking place in downtown Toronto, Canada. In this program, classroom teachers do not have full responsibility to implement the program; instead, special garden instructors, in teams of two, run formal and informal gardening workshops both within the schools and the surrounding communities. Children help grow the food, harvest it, make school lunches, compost leftovers from lunch trays, and then supplement the garden beds with finished compost. In other words, the students see and participate in the full nutrient cycle, as well as learn from lesson plans that link nutrition to topics across the full curriculum. There are other benefits to this program that also offers summer programs, family service programs, and youth leadership and employment programs. For example, in a one-square-kilometer city block surrounding a school, recent immigrants represented over 100 countries and over 160 languages. Harrison (2008/2009) states that, for these families, the program breaks down social barriers, addresses food insecurity, makes culturally significant foods available, provides access to healthy activities within walking distance of families’ homes, and offers practice with English, all while addressing the root causes of obesity and increasing micronutrient density in their diets.

From Toronto to California (once again), Chef Alice Waters has long been known for her work with the Slow Food<sup>6</sup> and Edible Education movements. The Slow Food movement seeks to preserve traditional and local foods, with an emphasis on sustainability, and is now active in 150 countries. This movement is important for many reasons, but most relevant for issues being discussed here, foods that are grown and harvested locally are much fresher and have not lost their nutrient density which occurs when there are time lags due to harvesting, packing, transport across country, distributing, unpacking, and finally shelving for the consumer. Local food systems are also more accessible to students; for example, small farmers are often open to students visiting their farms as well as to sharing knowledge with teachers for instructional school gardens. In addition to Slow Foods, Waters started the first Edible Education program at Martin Luther King Middle School in Berkeley, California. This program is interactive and multisensory and formed the foundation upon which First Lady Michelle Obama’s White House Garden was based. A

key concept is “food as part of everyday life” (Waters, 2008), not as a separate nutrition or food science class, but interwoven into every part of every day, including school gardens. Additionally, Waters feels it is a very important paradigm shift to focus on what students *can* eat rather than a “*don’t eat this, don’t eat that*” mentality. Her work has spread across classrooms throughout the country via *The Edible Schoolyard Project*<sup>7</sup>, an email newsletter rich with ideas detailing what other teachers and schools are doing across the U.S. and beyond.

So far, it can be seen that ideas on nutrition—primarily those of fruit and vegetable consumption, the foods highest in micronutrients—are moving in the right direction. First Lady Michelle Obama’s book, *American Grown: The Story of the White House Kitchen Garden and Gardens Across America*, has brought the importance of childhood nutrition and edible education to prominence at the national level. Here in the state of Michigan, Beeler’s *Tasting and Touring Michigan’s Homegrown Food* is bringing recognition to the slow food movement. More local still, in Grand Rapids, as in many locales across the state, seasonal and year-round farmers markets are flourishing, including those that accept supplemental nutrition assistance program (SNAP) vouchers.

Finally, in addition to becoming involved in legal mandates at the state level, implementing school nutrition programs, and designing instructional gardens, teachers can also help their students’ families through menu modification. More specifically, teachers can help families adapt the traditional food of their home culture using readily available ingredients (that are within WIC guidelines, if applicable) with high micronutrient density at manageable cost. For families that qualify, it should be noted that foods on the WIC approved list include fruits and vegetables, whole grain items such as brown rice, protein-rich legumes, and peanut butter. Organic versions of these foods qualify as well; however, white potatoes, due to their low nutrient load, are banned. It is also interesting to note that WIC guidelines include statements acknowledging both the increased cultural diversity of its participants as well as the national epidemic of obesity. As noted in the introduction, these parent education programs on menu modification for optimized health and learning might qualify under Title I and Title III of the ESEA and could conceivably involve the entire family, educating both students and parents together.

The overall goals of menu modification are: first, to keep true to culturally appropriate meals and second, to counteract the pull of a micronutrient-poor western diet. Specific goals include 1) increasing micronutrient density, 2) keeping protein (macronutrient) level high, though perhaps relying more heavily on vegetable source protein, and 3) keeping fat (macronutrient) level low and using “good” fats (e.g., use of olive oil, avocados, and peanut butter made simply with ground peanuts and salt) in preference to other oils, butter, and lard.

Using some sample Latino menus<sup>8</sup> as an example while keeping in mind the goals just mentioned, which of the following are more micronutrient dense: green tomatillo cream-based sauce, guacamole, sweet potato salsa, or tomato salsa? A cream-based salsa is typically heavy in fat, a problem of the western diet, so can be eliminated. Guacamole, though also containing a high fat content, would be considered a “good” fat, so it is better than the cream-based salsa. The first goal, though, is to increase the micronutrient density. Both sweet potatoes and tomatoes are micronutrient dense, so these would be the better choices. Moving to a main course, for example chicken and rice burritos, what could be done to increase the micronutrient density, maintain protein (macronutrient), and decrease

fat (macronutrient)? The ingredient list includes the following: long grain rice, vegetable oil, onion, ground cloves, tomatoes, chicken breasts, cheese, sour cream, flour tortillas, salt, and oregano. In order to increase micronutrient density, brown rice--which is richer in B vitamins--could be substituted for the more usual white rice while other vegetables, for example shredded carrots or squash, could be added in as well. Additionally, whole grain wheat or corn tortillas, instead of white flour ones, would also increase the micronutrient density. To keep the protein level high while also keeping the cost down, protein-rich legumes, for example black turtle or pinto beans, could be substituted for the more expensive chicken. For the third goal--lowering the fat content--the amount of cheese used could shift from that of major ingredient to that of garnish, and the sour cream could be substituted with plain Greek yogurt. Finally, for dessert, which of the following best meets the three goals: churros, sopaipillas, rice pudding, garbanzo cake, or seasonal fruit? Pastry type desserts are typically high in fat and sugar and low in micronutrients, so churros and sopaipillas would not be the best choice. Rice pudding, while possibly high in calcium, is likely to be high in sugar and micronutrient-poor white rice. Garbanzo cake would be a good choice for those trying to increase protein levels with non-meat sources, but it may also be high in sugar and fat. Seasonal fruit would be the best choice to meet all three goals; it is also a choice where children could be involved by cutting the fruit into shapes and forming into pictures, thus increasing their involvement and likelihood of eating. The above is just a sampling of how typical food patterns might be modified to increase micronutrient density, stay true to culturally appropriate meals, and decrease the more negative aspects of the western diet.

### **Conclusion**

Teachers rarely think about food and its impact on learning, yet with recent advances in the ability to monitor the functioning of the brain, it is becoming all too clear that nutrition, especially micronutrients, is crucially important in cognition, learning, and motivation. This is true for all students but especially those who are of limited SES, including recent immigrants, migrant workers, and refugees. These populations may not only have experienced limited access to high quality food in the recent past, they also may be grappling with issues of acculturation, including the pull of a nutrient-poor western diet. Teachers can help their students and their students' families by becoming involved in pro-nutrition state legislation, incorporating nutrition information across the curriculum, advocating for instructional school gardens, and helping families maintain culturally based eating patterns while increasing the micronutrient load and decreasing the pull of the less desirable elements of a western diet. Students and their families are hungry for success; sometimes the solution might be on their dinner plates – food for thought for teachers.

### **Acknowledgment**

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## Footnotes

<sup>1,2</sup> These titles were thought of several years ago; however, upon commencing research, it was found that others had also used them: Spencer (2008) in *Food for Thought* and a Scottish government report (2008) entitled *Hungry for Success: Further Food for Thought*.

<sup>3</sup> Material throughout the tutorial is taken from Bergmann, Hall, & Ross (2007) unless otherwise noted.

<sup>4</sup> In this author's view, an area ripe for exploration would be the investigation of brain activation in Broca's area in children with Specific Language Impairment (SLI), a language learning disorder that primarily affects the ability to process the morphological elements of language. This is especially important in the ESL learner as features of SLI map onto typical second language learning characteristics, thus causing confusion.

<sup>5</sup> It should be noted that potential bias exists in this study as the leading investigator is also the marketer of the program.

<sup>6</sup> Slow Food U.S.: [www.slowfoodusa.org](http://www.slowfoodusa.org); International: [www.slowfood.com](http://www.slowfood.com)

<sup>7</sup> The Edible Schoolyard Project: [www.edibleschoolyard.org](http://www.edibleschoolyard.org)

<sup>8</sup> Sample menu items and ingredients taken from Milton (2002) *The Cook's Encyclopedia of Mexican Cooking*.

## **Breaking the Ebbinghaus Curse for Vocabulary Acquisition with the R.E.S.T. Method**

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### **Abstract**

In 1885, Hermann Ebbinghaus, the great German psychologist, discovered that we forget up to 90% of what we learn within 30 days if we do not make a conscious attempt to retain the learned material. What is most troubling is that much of this information is actually forgotten just hours after the initial exposure. Ebbinghaus's study has been reconfirmed with recent research in neuroscience (Kandel & Hawkins, 1992; Medina, 2009; Sousa, 2011). Applying these daunting numbers to our students' retention of vocabulary, it is easy to understand why they forget a large percentage of the terms they study in their English language programs. This paper offers a solution to this conundrum by introducing the R.E.S.T. (Repetition, Emotion, Sensory Integration, and Teaching) Method as a means to help students learn vocabulary at a deeper level, retain it long after the initial exposure, and gain control over the definitions and uses of the terms with ease, confidence, and accuracy.

### **Introduction: The Problem**

It is every English language teacher's dream to see his or her students successfully acquire new vocabulary, use it properly, become familiar with its pragmatics, and ultimately retain it in their long-term memory. Once these initial tasks are completed, the students can then continue to use the lexical items to enhance their English language identity (see more on this in Guiora, Beit-Hallami, Brannon, Dull & Scovel, 1972). In reality, however, a great deal of the vocabulary we teach is often forgotten. In fact, Hermann Ebbinghaus, in his seminal work, *Memory: A Contribution to Experimental Psychology* (1885/1913), discovered that we forget 90% of what we learn within a mere 30 days. To make matters worse, his experiments showed that most of this loss of the newly acquired information occurs in the first few hours after the initial exposure. This discovery of over a century ago has been reconfirmed with recent research in neuroscience (Kandel & Hawkins, 1992; Medina, 2009; Sousa, 2011). This particular loss of information over a short period of time is what I call the "Ebbinghaus Curse" (Randolph, 2013a).

The question we face, then, is how do we "break" this curse? How do we get our students to remember the vocabulary we teach? The answer lies in a method I am developing called the Head-to-Toe Method for Vocabulary Acquisition, and a portion of that is the R.E.S.T. (Repetition, Emotion, Sensory Integration, and Teaching) Method, which focuses on tapping into key resources in the brain to help students acquire vocabulary and use it as naturally and correctly as possible.

## **A Brief Look at the Memory System**

Before presenting the R.E.S.T. part of the Head-to-Toe Method, I think a brief look at our memory system is in order. From what we currently understand about human memory, there are three major kinds: (1) sensory memory, (2) short-term or working memory<sup>1</sup> and (3) long-term memory. For the purpose of this paper, I will focus on how instructors can successfully transfer vocabulary items from their students' working memory to their long-term memory.

Long-term memory itself has two main categories: (1) *declarative* and (2) *nondeclarative*. The former deals with facts, emotions, facial recognition, general objects, and music. If we close our eyes a moment and think about our students, conjure up images of their faces, the sound of their voices, and the topics we recently studied together, then we are tapping into our declarative memory. If, on the other hand, we think about how to ice skate, hold a tennis racket in order to return certain serves, or ride a bicycle, then we are employing nondeclarative memory. Both forms of long-term memory require a three-step process in their formation: (1) *encoding* or inputting the new information into our brains; (2) *storage* or storing the newly acquired information; and (3) *retrieval* or extracting the information for use.

With a basic understanding of memory, let us return to our original question: How can we efficiently encode, store, and retrieve the vocabulary we teach and consequently break the Ebbinghaus Curse?

## **Background**

Vocabulary acquisition has become a recent focus for both English language teachers and researchers (McPherron & Randolph, 2014). Yet, thus far, no foolproof method has been developed to help students truly take ownership of lexical items and transfer them from that abstract realm of language acquisition to a more personal world of visceral comfort. Pedagogists like Zimmerman (2008) have offered ideas such as vocabulary notebooks and word cards to help English language learners (ELLs) study and recall vocabulary. Even these, however, require a sound pre-knowledge or understanding of English. That is, in order to even consider the most common or best definition of certain multi-definitional terms (e.g., *pick up*, *come up with*) the learner needs to know an item's register and be aware of its various possible uses. In short, although there are a number of useful suggestions, many are limited to high intermediate or advanced ELLs.

The R.E.S.T. Method, as we will see, is not, like so many other vocabulary acquisition strategies, limited to more advanced learners; but rather, it can be used to teach ELLs at any level from beginning to high advanced. In fact, this method could easily be implemented in K-12 ELL programs. A volunteer for the Bethania Kids Foundation in India, Carol Hart, is using it in her classes with children ages 12 to 18 (personal communication, June 21, 2014).

## **Objectives of the R.E.S.T. Method**

The most crucial objective that the R.E.S.T. Method sets out to accomplish is to help teachers and students break the Ebbinghaus Curse. This is primarily done by inspiring ELLs to play with the language and to form a sincere ownership of the lexical items. The method also encourages them to become risk-takers in their learning and develop into *language entrepreneurs*. A further objective is to get teachers and students to peek into the spiritual or metaphysical realm of language and view words as extraordinary and powerful creatures.

The more they delve into word and phrase-dynamics, the more confidence they will gain in both themselves and in their ability to use the language.

### **Implementation**

The elements of the R.E.S.T. Method are predicated on one common factor—to make as many neural connections (i.e., permanent links between neurons) as possible in the brain. For the more connections there are representing the memory of a lexical item, the stronger the recall of that item will be (Willis, 2006). That is, the actual physical connections between neurons are crucial in the learning process. The R.E.S.T. Method posits that there are more than one series of possible neural connections for one lexical item. In using all the components of the R.E.S.T. Method, we could—minimally—set three to four separate neural connections in motion.

It should be noted here that implementing all of the components of R.E.S.T. is unrealistic and perhaps even overwhelming in the beginning, especially if one is a novice at vocabulary instruction. I, therefore, suggest that instructors work on developing one element at a time, and then, when they feel ready to do so, incorporate all of the elements in their vocabulary lessons or the vocabulary portion of their respective language class. I typically use the first 20 to 30 minutes of a two-hour writing class to teach four to five new terms. Let us now take a close look at each aspect of the R.E.S.T. Method.

### **(R) Repetition and Spaced-Out Intervals of Review: Review to Remember**

The first step in breaking the Ebbinghaus Curse focuses on employing the repetition of newly taught lexical terms coupled with re-exposing the students to those terms at designated intervals (Ebbinghaus, 1885/1913; Medina, 2009; Willis, 2006). As Medina (2009) explains, “Memory may not be fixed at the moment of learning, but repetition, doled out in specifically timed intervals, is the fixative” (p. 130).

For instance, let’s say one teaches his or her students four new vocabulary items at the beginning of a reading or writing class. I first recommend that instructors elicit the definitions from the students using the Socratic method. This may require instructors to offer multiple examples so that the students can intuit the feeling and definition of the item in question. This step—in itself—provides multiple repetitions of the lexical items. Having the students supply the definitions gets them immediately engaged in the lesson, makes them feel like they are a part of the learning process, and nurtures ownership of the terms (Randolph, 2013b). It should be pointed out that instructors ought to make any corrections of the definitions as early as possible, as these initial moments of learning are pivotal in the encoding process (Sousa, 2011). After going over the definitions, the instructors should call on student volunteers to offer original example sentences for the terms. This step will also add to the number of repetitions concerning each term, but the importance here is that each time the term is repeated in a sentence, it will be unique and original, as the sentences will come from various students.

Once the students have studied the definitions and examples, the instructor should designate a particular area on the board (the upper left corner is a good spot) and write out the terms again so that they can be referred to and reviewed at spaced-out intervals during the remainder of the lesson. As the weeks of the semester progress, instructors can mix old and new terms together on this list, allowing for continual re-exposure to all the terms that the students learn throughout the course of the semester or session.

In short, step number one of the R.E.S.T. Method is to repeat and re-expose students to the vocabulary as much as possible. The students should also be encouraged to review the terms a few times on their own before the next class. For instance, studies have shown (Medina, 2009) that reviewing newly learned information before one sleeps is highly effective. It is now common knowledge that while we sleep, our brain still works away, solving problems, reviewing the day's events, and learning what it deems important.

### **(E) Emotions and Personalizing the Vocabulary: Developing Word Ownership**

Vernon E. Johnson (2003), in one of his thought-provoking lectures, insightfully claimed, "I am not an 'intellectual.' If anything, I'm an 'emotional.' I think most people are. Descartes should have said, 'I FEEL, therefore I AM.'" The second aspect of this method thus rests on incorporating the use of emotions in our lessons. As Johnson wisely stated, we fundamentally are emotional beings. Emotions do—without a doubt—make us who we are.

Above, we briefly noted the three stages involved in the process of constructing long-term memory. Encoding, the first step in this process, is critical; it is the deciding factor as to whether or not information will be stored and later retrieved. The more emotional the content in the encoding stage, the better the chance students have of learning it. According to Medina (2009), "The more personal an example, the more richly it becomes encoded and the more readily it is remembered" (p. 115). These ideas are reinforced by Willis (2006), a former neurologist turned classroom teacher. She claims, "a student must care about new information or consider it important for it to go through the limbic system expeditiously, form new synaptic connections, and be stored as a long-term memory" (p.20).

The emotional content in our vocabulary lessons has profound consequences in the chemistry of our brain. When the brain reacts to emotional or personal content, the amygdala<sup>2</sup> releases dopamine into the system. This sequence of events is important because the neurotransmitter, dopamine, is highly involved with memory, learning, satisfaction, and processing new information (Jensen, 2008; Medina, 2009). So, healthy emotions not only make us feel good, but they aid in the chemical process of how we learn.

In the fall of 2013, I conducted a short survey in my ELL speech and writing courses on the basic emotions (joy, sadness, fear, surprise, anger, and disgust) and their influence on learning vocabulary (n=42) (Randolph, 2013c). Fear was the top ranked emotion that motivated learning; it received 21 votes. Joy and surprise were tied for second with 20 votes each. Anger received 4 votes and sadness 3. Disgust received only one vote. All of my students were very clear in their additional comments that without emotion—be it a positive or negative one—they have difficulty retaining new vocabulary.

How, then, do we incorporate the emotions and personalize the content in our vocabulary lessons? First and foremost, the delivery of the material must be given in an exciting and emotional fashion. For, as Medina's research has shown, "We don't pay attention to boring things" (2009, p.71).

The energy level of the class, then, must be set as high as possible while simultaneously communicating the material with an effective presence. Instructors need to pay close attention to their gestures, facial expressions, and tone of voice. All of these play a pivotal role in the energy and emotional ambiance of the classroom.

The second key factor that helps elicit emotions is one I referred to above in the first segment; that is, to have your students create example sentences of the vocabulary terms learned in class. In doing so, the students will feel an immediate bond with the lexical items and develop a sense of personal ownership. "There is a strong possibility that the students

will personalize these examples, which will help evoke even more emotion and personal interest in the vocabulary” (Randolph, 2013c, p. 3).

The third use of emotion is a point I focus on in the Head-to-Toe Method in which I ask the students what specific emotion or combination of emotions they feel in regard to a certain word or phrase. For example, they may respond to a word like “democracy” with the emotional associations of “joy,” “bliss,” or “the feeling of freedom,” or they may respond to a word like “juxtapose” with “excitement,” or “fairness.” That is, when “juxtaposing” cultures, we all learn new things and this learning is filled with “excitement,” or in “juxtaposing” two ideas, one needs to show “fairness.” Although “fairness” and “freedom” are not emotions per se, they are “associations” filled with emotion for the learner in question, and the more associations we help the students create, the more neural connections they will develop. And the more neural connections they develop, the easier it will be for them to learn and recall the taught vocabulary.

And lastly, I find it very effective to use the students’ names, countries, cities, or some element from their cultural background in the example sentences. This will help them remember the meanings of the terms (Randolph, 2013b). In addition, it immediately grabs the students’ interest and adds to that all-important step of encoding. It also helps create associations with the lexical items on an emotional and personal level.

### **(S) Sensory Integration: Multisensory Learning is Natural Learning**

How much of what we learn is encoded in absolute isolation? If we answer honestly, we would say, “Very little.” Thus, the third component of R.E.S.T. is the application of sensory integration. In exercising this point of the method, I always introduce a vocabulary item by asking the students to tell me what *color* or *odor* they associate with the word or phrase we are learning.

If we reflect for a moment, most learning is multisensory in nature because we learn in a context brimming with various stimuli in the environment. For example, when one learned the word “snow,” it might have been outside on a cold winter’s day. The colors, textures, smells, sounds, and tastes of the experience all contributed to the moment the word was learned. Unfortunately, however, many vocabulary acquisition classes or lessons are unisensory or minimally bisensory in nature. That is, often instructors present a list of terms to the students and ask them to memorize the list (unisensory). If they are lucky, the instructor may go over the pronunciation of the terms as well (bisensory). So, minimally, they get the audio-visual elements of the terms. The incorporation of multi-sensory learning, however, is more helpful and elaborate because it creates more associations in the learning process.

Let’s take a recent example from a class I taught last fall. I was teaching the word “meticulous.” After eliciting the correct definition via an examination of various example sentences and going over its function as an adjective, I asked the students what color they see or odor they smell when I say the word “meticulous.” One student responded by saying, “I see orange.” When I asked why she chose that color, she replied, “My mother is meticulous, and she loves orange.”

If we take a look at this simple exchange, we can see a number of fascinating developments. First, by associating the term with the color, the student has taken one step closer to the realm of personalization and ownership of the word. Second, she has made an emotional association by linking the term with her mother; this, in itself, will, as above, help encode the memory of the term. And knowing how close this particular student was to her

mother, this was a powerful association, indeed. Third, there is a high probability that the association with this color, coupled with the emotional attachment to her mother, elicited emotional and learning-based neurotransmitters, which help in all three stages of the learning process: encoding, storage, and retrieval. Fourth, because she associated the word with her mother, there is a very good chance she also associated things like her mother's face, favorite perfume, and even her voice with the word "meticulous." All four of the above points reinforce how important it is to introduce a multisensory environment to vocabulary lessons, for, as Medina (2009) tells us, "learning abilities are increasingly optimized the more multisensory the environment becomes" (p. 207).

At the end of each semester, I have my students complete a brief questionnaire on the sensory integration aspect of the R.E.S.T. Method. Their responses are very favorable with respect to both color and smell. They claim that using these two components truly helps them learn the terms at a deeper level and with greater confidence and ease.

### **(T) Teaching Others and Talking About What You Learn: Learning is Teaching**

Prominently displayed on page one of my class syllabi reads the following: "Whatever you learn in here, teach to others, for learning is teaching and teaching is learning." I've always felt that learning is only optimized when one teaches what he or she has learned: It engages the mind on a whole new level and creates the needed sense of ownership and pride in making the material in question an actual "part" of the learner.

What is wonderful about this intuition of mine is that it is supported by members of the psychology and neuroscience communities. Craik and Lockhart (1972) called it "elaborative processing" (p. 68). This essentially deals with a detailed processing of information via thinking and or talking about it. This all results in the development of strong memories.

When students learn a new vocabulary term, I tell them that they have three choices: one, they can just forget it; two, they can remember it but keep it to themselves; or three, the preferred action, they can talk about it and teach it to others. If they take the third option, then they will actually be using the R.E.S.T. Method in a natural and practical way: (1) they will be repeating the information and doing it at spaced-out intervals; (2) they will be adding emotion to the process by personalizing their examples; (3) they will be using some sensory aspect—the obvious element would be an auditory-based explanation; and (4) they will be thinking about it, talking about it, and teaching it to others. And what Medina (2009) has found is that "a great deal of research shows that thinking or talking about an event immediately after it has occurred enhances memory for that event" (p. 131).

To ensure that my students participate in the fourth and final aspect of the R.E.S.T. Method, I ask them to pair up and review the learned vocabulary. They can orally quiz each other in the traditional manner of question and answer by asking each other the definitions, but I prefer that they go through the elements of the method and add gestures. I have one student create a gesture that represents a term and ask his or her partner to guess the term related to the gesture. Then, I have them give example sentences, colors, smells, and emotions related to the terms and conclude with the parts of speech and register.

For example:

Student A: (Gestures like he is thinking.)

Student B: (Guesses.) “The term is ‘come up with.’”

Student A: “Yes! Correct! What does it mean?”

Student B: “To create, think up, produce, make or discover.”

Student A: “Good. Can you give me an example?”

Student B: “Yes. You came up with a good gesture for ‘come up with.’”

Student A: “Nice! What color or smell do you think of with this term?”

Student B: “Yellow. It’s like a light.”

Student A: “Good. What emotion do you feel?”

Student B: “Joy! Because creating makes me happy.”

Student A: “What part of speech is this?”

Student B: “It’s a three-part phrasal verb.”

Student A: “Is it formal or informal?”

Student B: “It can be used in both situations.”

Student A: “Good.”

### **Evaluation: A look at surveys and testing results**

The R.E.S.T. Method has proven to be an effective way of helping ELLs to acquire more vocabulary at a deeper level of understanding in regard to how the lexical items work in a number of academic and nonacademic situations.

In order to give others a brief understanding of how the students perceive the method, I’d first like to address a recent student survey (n=32). In this end-of-the-semester questionnaire, I asked 32 students a number of questions related to their perceptions about whether or not they found the method effective and useful. Regarding the first statement of this survey: “I found this method useful,” 75% strongly agreed, 19% agreed, only 3% disagreed and another 3% strongly disagreed. With respect to the second statement: “The method helps me learn vocabulary at a deeper level,” 69% strongly agreed, 25% agreed, 0% disagreed and only 6% strongly disagreed. The statement I was most interested in is “I recommend other teachers use this method.” Here 69% strongly agreed, 28% agreed, 3% disagreed and 0% strongly disagreed. In short, the overall student perceptions of the method seemed to be very favorable. In fact, the one student who stated he didn’t find the method useful, still felt that other teachers should use it, because he believed students would benefit.

Perhaps the most telling set of results as to whether or not this method is effective rests on two semesters worth of test results (n=121). These tests were typically worth 25 points: 15 points for definitions and 10 points for correct use of the term in an original sentence. When not using the method, the class average on vocabulary tests ranged anywhere from 67% to 78%. However, when I tested the students after using the R.E.S.T. Method, the scores ranged from 83% to 95%. What is most inspiring is that the results of

five pop quizzes yielded averages of 85% to 96%. That means, even without studying the vocabulary outside of class, the method used during class time was sufficient enough for the students to recall and use the terms correctly.

### **Concluding Remark**

At the onset of this paper, I posed the question of how it is that English language teachers can break the ever so daunting Ebbinghaus Curse and help their students truly learn and retain vocabulary terms. I offered the R.E.S.T. Method, a branch of my Head-to-Toe Method, as a viable solution. One documented benefit of this method is that it helps students gain ownership of vocabulary, because they can easily personalize the terms and the uses of the terms; it makes them establish a closer relationship, as it were, to the English language. This, in itself, helps create a stronger and sincere sense of control over the language. Second, the method allows the students to play with the vocabulary items, experiment with how they work in sentences and also investigate how they work with different registers in both spoken conversation and the written language. And third, it helps the students retain the vocabulary in their long-term memory and break the age-old Ebbinghaus Curse.

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## Footnotes

<sup>1</sup>There is much debate in the categorizing and labeling of short-term and working memory. Traditionally, these were considered two distinct forms; however, current research seems to point to them being one and the same. Many of these conclusions have been drawn because short-term memory is far more complex and much more important than once thought. Thus, short-term memory is actually a very profound working memory that greatly helps in the consolidation of long-term memory (Medina, 2009).

<sup>2</sup>The amygdala is a key component of the limbic system. It plays a crucial role in processing memory, emotional reactions, and motivation. In particular, it is one of the most important centers for storing emotional-based memories.