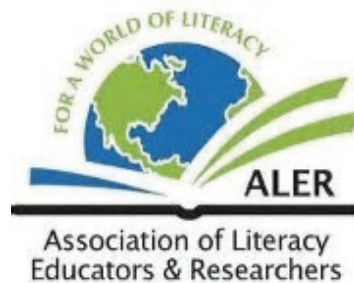


Literacy Educators and Researchers: Making a Difference in our Diverse Communities



Editors:
Robin D. Johnson
Sheri Vasinda
Susan Szabo

LITERACY EDUCATORS AND RESEARCHERS: MAKING A DIFFERENCE IN OUR DIVERSE COMMUNITIES



The Thirty-Eighth Yearbook: A Double Peer-Reviewed Publication of the Association of Literacy Educators and Researchers

Co-Editors

Robin D. Johnson

Texas A&M University-Corpus Christi

Sheri Vasinda

Oklahoma State University

Susan Szabo

Texas A&M University-Commerce

Copyright 2016 Association of Literacy Educators and Researchers

Photocopy/reprint Permission Statement:

Permission is hereby granted to professors and teachers to reprint or photocopy any article in the Yearbook for use in their classes, provided each copy of the article made shows the author and yearbook information sited in APA style. Such copies may not be sold, and further distribution is expressly prohibited. Except as authorized above, prior written permission must be obtained from the Association of Literacy Educators and Researchers to reproduce or transmit this work or portions thereof in any other form or by another electronic or mechanical means, including any information storage or retrieval system, unless expressly permitted by federal copyright laws. Address inquiries to the Association of Literacy Educators and Researchers (ALER) April Blakely.

ISBN: 978-1-883604-04-2

ALER BOARD OF DIRECTORS 2015-16

Executive Officers

President: Julie Kidd, George Mason University

President-Elect: David Paige, Bellarmine University

Vice President: Rona Flippo, University of Massachusetts Boston

Past President: J. Helen Perkins, University of Memphis

Past-Past President: Parker Fawson, Utah Valley University

Executive Secretary: Ashlee Horton, University of South Carolina Aiken

Treasurer: April Blakely, Eastern Kentucky University

WebMaster ex officio member: Melanie Landon-Hays, Western Oregon University

Directors

Tami Craft Al-Hazza, Old Dominion University

Doris Walker-Dalhouse, Marquette University

Mary Robbins, Sam Houston State University

Nina Nilsson, Saint Joseph's University

Jeanne Cobb, Coastal Carolina University

Linda Martin, Ball State University

Sylvia Read, Utah State University

Division Chairs

Adult Learning Division – Tammy Francis Donaldson, Del Mar College

Clinical Research and Practice Division – Vicki Collet, University of Arkansas

College Literacy Division – Tim Morrison, Brigham Young University

Teacher Education Division – Donna Cox, Sam Houston State University

Committee and Commission Chairpersons

Conference Coordinator – MaryBeth Allen, East Stroudsburg

Program Chair - David Paige, Bellarmine University

Awards - J. Helen Perkins, University of Memphis

Reading Room/Exhibits - Robin D. Johnson, Texas A&M University - Corpus Christi & Micheal Kessner, Mesquite ISD

Membership – Corinne Valadez, Texas A&M University- Corpus Christi & Tiana M. Pearce, Texas A&M University- Corpus Christi

Public Information – Leslie La Croix, George Mason University

Publications – Sheri Vasinda, Oklahoma State University

Legislative & Social Issues – Mary C. McGriff, New Jersey City University

Research – Catherine McGeehan, Kutztown University & Michael Manderino, Northern Illinois University

Resolutions & Rules – Carolyn Walker Hitchens, Ball State University

Historian – Ellen Jampole, State University of New York-Cortland, Barbara McClanahan, Southeastern Oklahoma State & Wayne Linek

Elections – Parker Fawson, Utah Valley University

Photographer – Ellen Jampole, State University of New York-Cortland

Editors and Editorial Teams***Literacy Research and Instruction Co-Editors***

Vicky Zygoris-Coe, University of Central Florida

Michelle Kelley, University of Central Florida

Sherron Killingsworth Roberts, University of Central Florida

Literacy News Blog

Valerie Robnolt & Joan Rhodes, Virginia Commonwealth University

ALER Yearbook

Robin D. Johnson, Texas A&M University–Corpus Christi

Sheri Vasinda, Oklahoma State University

Susan Szabo, Texas A&M University-Commerce

ALER Yearbook Editorial Review Board

Juan Araujo, Texas A&M University - Commerce

Allison Baer, The University of Findlay

Estanislado S. Barrera, Louisiana State University

Nedra Cossa, Armstrong State University

Peggy Daisey, Eastern Michigan University

Patricia Durham, Sam Houston State University
Carol Fetters, Innovations with Solutions, LLC
Sherrye Garrett, Texas A&M University – Corpus Christi
Lois Haid, Barry University
James Hoffman, University of Texas at Austin
Pam Hollander, Worcester State University
Jackie Ingram, Sam Houston State University
Riamliw Jakraphan, University of Pittsburgh
Julie Kidd, George Mason University
Kent Layton, University of Arkansas at Little Rock
Linda Lilienthal, University of Nebraska-Kearney
Roberta Linder, Wittenberg University
Teddi Martin, University of North Texas in Denton
Barbara McClanahan, Southeastern Oklahoma State
Ginger Modla, LaSalle University
Kelli Paquette, Indiana University of Pennsylvania
Seth Parsons, George Mason University
Monica Pershey, Cleveland State University
Bethanie Pletcher, Texas A&M University-Corpus Christi
Debra Price, Sam Houston State University
Diana Quatroche, Indiana State University
Roberta Raymond, University of Houston – Clear Lake
Carolyn Stufft, Berry College
Chase Young, Sam Houston State University

TABLE OF CONTENTS

Acknowledgements	ix
Introduction	xi
Presidential Address	3
Examining the Work of the Association of Literacy Educators and Researchers through the Lens of Social Justice <i>J. Helen Perkins</i>	
General Assembly Speaker	11
Preparing Educators Who Make a Difference in Our Diverse Communities <i>Patricia A. Edwards</i>	
Awards Breakfast Keynote Speaker	23
Transnational Religious Practices: Funds of Knowledge for Literacy Learning <i>Catherine Compton-Lily</i>	
Laureate Award Winner	37
Literacy: Reading Redux or Reading Gone? <i>Mary F. Roe</i>	
Research Award	49
High School Teachers' Disciplinary Literacy Knowledge Dissertation Winner <i>Paula Di Domenico</i>	
Making a Difference in Our Diverse Communities: Impacting Children, Adolescents, and Families	
Research to Practice: Web Literacy Strategies for Teachers and Students <i>Jodi Pilgrim and Elda Martinez</i>	71

Teachers Bridge Disciplinary Literacy through a Culture of Assessment and Technology	85
<i>Diana J. Quatroche, Kathryn L. Bauserman, and Eric M. Hampton</i>	
Narrowing The Discourse Possibilities: An Examination of Second Grade Curriculum Materials for Teaching Writing	103
<i>Alayne Jorgensen and Sylvia Read</i>	
More Than a Decade Later is RTI Working?	117
<i>Joyce V. W. Warner, Priva Fischweicher, Lois K. Haid, and Agnes Shine</i>	
An Investigation of Adults Who Struggled With Reading as Children and How They Were Impacted by Theatre and Drama Activities	135
<i>James Nageldinger</i>	
Making a Difference in Our Diverse Communities: Impacting Adult Learners	
Preparing Literacy Coaches: Designing a Coaching Practicum	149
<i>Susan L. Massey</i>	
Leadership Functions of Nationally Board Certified Teachers and Teacher Certification Candidates	161
<i>Allison Swan Dagen, Aimee Morewood, and David Loomis</i>	
Investigating Korean University Students' Beliefs about Language Learning: Moving from an EFL Context to an ESL Context	179
<i>Kay Hong-Nam and Susan Szabo</i>	
Making a Difference in Our Diverse Communities: Impacting Teacher Education	
Content-Area Reading and Writing: A Brief Historical Perspective to Inform Research, Policy, and Teacher Preparation	199
<i>Chyllis E. Scott and Diane M. Miller</i>	
A Study of Pre-Service Teachers and Their Self-Efficacy: Using Adapted Books for Literacy Instruction for Learners with Disabilities in Inclusion Classrooms	219
<i>Robin D. Johnson and L. Kathleen Sheriff</i>	
Teacher Candidates: Teaching and Learning With Technology to Improve Literacy Skills and Practices	233
<i>Nance S. Wilson, Linda Smetana, Dana Grisham, and Christine Widdall</i>	

ACKNOWLEDGMENTS

The Yearbook provides a snapshot of the highlights of our Annual Meeting and sampling of some of the proceedings. It would not be possible without the diligent work of many of our colleagues. As always, we have many people to acknowledge for the completion of Volume 38. First, we wish to thank all the authors whose insightful thinking brought forth inquiries that add to and extend the body of knowledge on a wide variety of literacy topics. Next, we would like to thank our editorial board members, as they thoughtfully evaluated submissions and offered additional perspectives to strengthen each piece. This collaboration resulted in the creation of high quality articles and continues to add rigor to this Yearbook's publication. Additionally, we are grateful to the members of the Board of Directors who have continually supported the editorial team and the publication of the Yearbook, as well as Dr. Sheri Vasinda, the Publication Committee Chairperson.

This year will bring about the end of an era for the ALER Yearbook as we say goodbye to a longstanding member of the ALER Yearbook editorial team. Susan Szabo is celebrating her 10th and final year as a co-editor for ALER. Susan became an assistant professor at Texas A&M University-Commerce in August 2004. She was introduced to then CRA by active members Wayne Linek and Mary Beth Sampson and joined in 2005. She became an active member immediately, as her ten-year journey as a co-editor of the CRA/ALER YEARBOOK began that same year. Over the 10 years, Susan has worked with three different co-editor teams, celebrated the 50th anniversary with the organization, and experienced the writing process from adjudicating to printing.

The start of her amazing journey began with the end of the 2005 conference and the publication of Volume 28 in 2006 with the co-editor team of Mary Beth Sampson (now Sampson-Perry), Francine Falk-Ross, Martha Foote, and Pat Linder. Volume 31 was the big year CRA became ALER, and we celebrated the organization's 50th year anniversary. Starting in 2010 with Volume 32 a second group of co-editors was approved, consisting of Timothy Morrison, Linda

Martin, and Merry Boggs. During this time at the university level, Susan became an associate professor and gained tenure. The third and final team began with the end of the 2013 conference and the publication of Volume 36 in 2014 with co-editor team of Sheri Vasinda and Leslie Haas, who was replaced by Robin Johnson a year later. During this time at the university level, Susan was promoted to full professor.

When asked to reflect on her tenure as an ALER Yearbook editor, Susan said, “This 10 year journey has been a truly awesome experience. I have met and worked with many wonderful peers over the years, and we have learned about good writing together as we have worked through the adjudication process. Additionally, the adjudication process for Volumes 28-35 also involved proof-reading, type setting and printing, as the yearbook was printed by the Texas A&M University-Commerce printing department. So much time and energy went into not only the adjudicating process but the printing process. With Volume 36, this process changed and the yearbook is now a totally online publication.”

Finally, we are very fortunate and grateful for the ongoing support provided by our individual universities. At Texas A&M University-Corpus Christi, we appreciate the support of Interim Dean Dr. Karen McCaleb of the College of Education and Human Development and Department Chair of Teacher Education, Dr. Carmen Tejeda-Delgado. We thank Dean John Romans of the College of Education at Oklahoma State University and Dr. Jennifer Sanders, Head of the School of Teaching and Curriculum Leadership, for support that included the allocation of our very valuable graduate editorial assistants, Indrit Vacuj and Lisa Lynn. An additional thank you is extended to Dean Timothy Letzring of the College of Education and Human Services at Texas A & M University-Commerce and Dr. Martha Foote, Department Head of Curriculum and Instruction, for providing support for this publication. Poet Mattie Stepanek articulates this well with “Unity is strength... when there is teamwork and collaboration, wonderful things can be achieved.” From authors to reviewers to university support and every support in between, this publication is a reflection of each team member’s contribution focused on a worthwhile goal.

—Robin Johnson, Sheri Vasinda, & Susan Szabo

INTRODUCTION

The theme for the 59th annual conference of the Association of Literacy Educators and Researchers was Making a Difference in Our Diverse Communities. Dr. Julie K. Kidd, then ALER President-Elect and Conference Program Chair, wrote in her message to ALER members in the conference program:

This theme is especially relevant because, as literacy educators and researchers, we make a difference in our diverse communities. Every day, we touch someone's life through our teaching, our research, and our service to others. Just like the children, youth, and adults whose lives we influence, we are a diverse group of educators and researchers. Although we come together for a common purpose, we bring with us our diverse experiences and perspectives. It is important that we embrace the diversity of our ALER community and seek to invite and welcome others with diverse perspectives and backgrounds to join us. Our work is enriched and our lives enhanced when we listen to stories, consider how to prepare educators to provide high quality education for all learners, explore the richness of others' experiences, and examine our work through the lens of social justice. Over the next few days, our speakers and presenters are prepared to move our thinking forward. They will challenge us to recognize injustices and focus our attention and energy on promoting equity through our work as literacy educators and researchers.

The powerful work we do as literacy professionals is reflected in this message and in the thinking that was shared as we gathered together in Costa Mesa, California in 2015. Our annual conference provides opportunities to learn from and with each other, during keynotes and sessions, as well as the incidental learning resulting from the conversations and collaborations that occur as mutual interests are discovered during sessions, between sessions, and at social gatherings. ALER is known for a supportive collegiality and camaraderie in which educators and

researchers at every stage of their careers learn from each other and are inspired to grow professionally and personally from these encounters.

In the first section of the Yearbook, Dr. J. Helen Perkins's presidential address shared the story of her journey as an educator and how it influenced her awareness of the importance of social justice in teacher education. Then, in "Preparing Educators Who Make a Difference in Our Diverse Communities," Dr. Patricia A. Edwards wrote, "Teachers have a responsibility to all their students to ensure that all have an equal opportunity to achieve to the best of their abilities." These two articles, along with the other featured speakers and award winners, described the need for teacher educators and researchers to rise to the challenge of preparing the next generation to embrace diversity and implement best practices in literacy instruction that will meet the needs of ALL learners. In section two, the authors explained how their research on web tools, drama and play, intervention strategies, and curriculum materials impacted children, adolescents, and families. Section three showcases the research from teacher leaders, English language learners, and literacy coaches and its impact on adult learning. Section four focuses on the impact our research has on teacher education programs.

All of the articles within this Yearbook represent a sampling of the sessions presented at the conference. After a peer-review process for conference acceptance, the ensuing articles underwent an additional round of peer review for acceptance in the Yearbook. The articles reflect the theme and broaden it in terms of cultures to include not only cultures of ethnicity, race, gender, politics and economics, but also cultures of new literacies and technologies. The authors address both research and practice providing additional opportunities for making a difference in our diverse communities.

—RJ, SV, & SS

PRESIDENTIAL
ADDRESS

EXAMINING THE WORK OF THE ASSOCIATION OF LITERACY EDUCATORS AND RESEARCHERS THROUGH THE LENS OF SOCIAL JUSTICE

PRESIDENTIAL ADDRESS

J. Helen Perkins, Ed. D.
University of Memphis

*J. Helen Perkins, Ed. D., is an Associate Professor of Reading and Urban Literacy at the University of Memphis. Dr. Perkins has nearly 40 years of experience in education, having served as a reading specialist, classroom teacher, literacy coach and in various other capacities. She is former Editor of *The Reading Teacher*, an educational journal published in over 100 countries and served as the Past-President of the Association of Literacy Educators and Researchers. She serves as a member of the Tennessee Reading Association Advocacy and Legislative Committee. She is the Co-Common Core Author of *Journeys*, a Basal Reading Series, several articles and book chapters; she has also written a children's book.*



Her present scholarly work focuses on children of poverty, their literacy acquisition and enhancement, and best practices. She was recognized by the U of M as a Member of the "PI Millionaire's Club" because of the amount of grant funding she has received.

She has served as Principal Investigator of grant projects and academies for teachers and principals assisting in teacher capacity building and continues to do so.

She is the Immediate Past Board Chair for Porter-Leath, the locally famous NGO that has helped meet the needs of children and families since its founding in 1850. During her tenure, the organization received over \$12 million in grants and contracts to continue its mission. Porter Leath is the largest Head Start group in the state of Tennessee.

Dr. Perkins rounds out her community service by conducting workshops for parents, teen fathers, volunteers, and tutors; and offering professional development seminars for educators of under-represented and under-performing students in both urban and rural environments. She has received many awards and honors for her work, among them the Urban Impact Award from The Council of Great City Schools and recently the Dr. Martin Luther King Jr., Human Rights Award.

Mr. Nelson Mandela reminds us “Education is the most powerful weapon used to change the world.” Drawing on our conference theme of making a difference in our diverse communities, education is how we can make a difference. The Association of Literacy Educators and Researchers’ (ALER) members continually make a difference by conducting numerous research studies, which help to inform teacher practice. This research has been used to provide focus areas for professional development, which makes a difference. The results of our research when implemented with fidelity, enhances the opportunity for individuals to lead fulfilling lives and to be active effective contributors to their communities.

Emphasizing the second part of our 2016 theme, “in our diverse communities”, leads us to working toward social justice. Social justice is a human right; justice that includes race, class, ability, language, appearances, sexuality and gender. Social justice theory recognizes the inequality in society and attempts to promote mobility and opportunities for families living in poverty and individuals who are marginalized (Freire, 2000). Our research also recognizes this inequality and attempts to identify the most effective strategies, methods, and materials; thus, supporting the need for improved instruction while promoting and motivating equity in literacy toward a positive change in schools and the communities. My address identified ALER research via publications, the goals of our association, and the work of our members as supports for developing quality teachers. Quality teachers working through a lens of social justice in their diverse communities provide the education needed for impactful change. This address begins with my own story and the impact education, specifically literacy, had on my life.

My Own Education Journey

Education has definitely impacted my life; it has made a tremendous difference in my life as I have experienced many forms of racism, but racism has not hindered me. While attending conferences, I've been invited to clean tables. As a matter of fact, the racism that I have experienced has motivated me to continue my journey, to work harder and to serve those who have also been exposed to social injustice.

I was born in a rural town, Seminole, Oklahoma, where I grew up with parents who did not possess a high school diploma; however, they valued education. It was a priority in my house with my five siblings. We were required to spend an hour or more daily reading, working on assignments, and studying for exams. My formal education began at an all-Black school, Booker T. Washington, with an amazing teacher, Mrs. Buckner. She was the epitome of an educator. Then our schools were desegregated and I fearfully attended an all-White school where Mrs. Whitney was my first Caucasian teacher. Mrs. Buckner and Mrs. Whitney nurtured and supported my desire to learn and to read! I was so excited about reading that one day after school during my 3rd grade year, I announced to my parents that I was going to be a teacher and teach people how to read all over the world. In my young mind I knew I would make a difference because I had taught all my Barbie Dolls how to read. During my high school years, I served as President of the Future Teachers of America (FTA) as I continued to support my desire to teach everyone how to read! Upon graduating from Seminole High School, I entered the East Central University on an academic scholarship and in three and a half years received my Bachelor of Science in Elementary Education. Later, my journey as a Reading Specialist began while working on my Masters in Education and Reading; both degrees were received from Southeastern Oklahoma State University

I eventually received a Doctorate in Instruction and Curriculum with a Reading Concentration at Oklahoma State University (OSU). OSU was my choice even though it was several hours away from my husband and our daughters, but the professors at OSU totally supported my desire to enhance my education so that I could effectively conduct research in the area of African American (AA) children and their literacy acquisition and enhancement at a time when other universities did not view this as a priority. I was aware that AA children weren't receiving quality education; therefore, I decided to research the most effective literacy practices to bridge this gap. This research would inform my pedagogical practices and the teaching practices of others who are educating our children.

While working on my doctorate at OSU, I became a Literacy Coach for Dallas Independent School District. This five year collaborative effort impacted the teaching practices of 3000 Kindergarten to 3rd grade teachers. As Dr. Robert Cooter (an award-winning ALER member) served as our leader, The Dallas Reading Plan succeeded in improving student reading performance significantly in the tenth largest school district in the United States. The Dallas Reading Plan served as the context of a book to discuss systemic reform of urban literacy programs titled, *Perspectives on Rescuing Urban Literacy Education: Spies, Saboteurs, and Saints*. Dr. Cooter edited the book while several of us contributed chapters on various topics.

As I entered the world of university life, Dr. Connie Briggs suggested that I attend the College Reading Association Conference, and of course I did. I began serving this organization in the Clinical Division. Best literacy practice knowledge and the materials that work best with students were gleaned as I became very involved. It was such an honor when I became the President of this impactful organization. Today, my ALER colleagues and I continue on our journey as we attempt to improve and enhance the literacy practices of educators throughout the United States and the World. We hope that both teachers and children will benefit from our tenacious efforts to make a difference through the lens of social justice.

Social Justice and Diversity

We must promote social justice awareness in education as we advocate for our children; it is our responsibility as educators and as leaders in our society. Social Justice Theory recognizes the inequality in society and attempts to promote mobility and opportunities for families living in poverty and individuals who are marginalized (Freire, 2000). Family backgrounds, class, religion, gender, and ethnic origin should not be obstacles to education achievement for students, but they do sometimes hinder them. Failure to provide quality education undermines the human dignity of our students as we acknowledge that children from non-dominant homes such as children from non-white and immigrant families often suffer educational disadvantages (Hyland, 2010). Social justice promotes a just society where individuals experience equitable treatment.

Diversity serves as a major principle of social justice; diversity includes race, ethnicity, gender, sexual orientation and language. Also, included in diversity are culture, religion, mental and physical ability, class and immigration. Research analysts predict that students from minority racial groups will make up over half of the school-aged population by 2050, but these students continue to score lower on standardized test, are included in the high number of dropouts,

experience high rates of expulsions, and high percentages of referral for special education services (Hyland, 2010). While considering these issues, it is imperative that educators continue to develop practices that address the educational injustices experienced by the children; teachers should implement best practices conducive to creating a more just learning environment (Hyland). It is important that educators accept diversity, as it is necessary for student development in the education system and it is this acceptance that helps to narrow the education gap between the highest and lowest performing students. According to Sanders and Rivers (1996), African American students' achievement gains from having an effective teacher could be almost three times as large as Caucasian students.

It is clear that education is a tool that mobilizes a population to success and moves them from poverty. Literacy is a major part of education as it serves as an open door to social justice. Literacy educators thrive to promote instructional practices that focus on a diverse population while using culturally responsive instruction which assist teachers in changing their teaching methods to enable diverse racial groups and genders to achieve. The importance of the teacher as a decision-maker has been noted as a key factor in effective teachers (Pearson, 1996).

Teachers Make a Difference

Teachers are the most important school-related factor for students' achievement gains. Students who are taught consistently by highly effective teachers have significantly greater gains than those who are taught by less effective teachers (Darling-Hammond, Bransford, & LePage, 2005). What teachers know, what they can do, and how they instruct are important factors that influence what students learn (Center for Public Education, 2005). Teachers have a role in implementing social justice in our schools; they serve as advocates for social justice in the classroom and implement research-based strategies that will allow them to engage with best practices in teaching. Providing children with the opportunity to receive quality education is essential for their success and the success of our nation; therefore, every child deserves to have an effective teacher.

There are many factors that contribute to a student's academic success, including individual characteristics, family, and neighborhood experiences. However, research has proven that among school-related factors, teachers matter the most, as a teacher is estimated to have two or three times the impact on a student's academic success than any other school factor, including services, facilities, even leadership (RAND Education, 2012). Teachers are an important influence in the lives of children during their early years of development; therefore, the importance of teachers cannot be understated (Mubarak, 2014).

Research using student scores on standardized tests have confirmed the common perception that some teachers are more effective than others. These results have also created awareness that when students are taught by an effective teacher, their academic achievement is higher (Nye, Konstantopoulos & Hedges, 2004). Schools and their communities have always sought the best teachers because they believe that the students' success depend on it (Center for Public Education [CPE], 2005). Improving schools will help prepare students to be engaged citizens and meet the demands of the job market as teachers improve the strategies and skills that students need to enhance their academics. ALER continues to offer teachers research to practice information to effect change in students' lives.

ALER's Research Informs and Enhances Both Teachers' Knowledge and Practice

The Association of Literacy Educators and Researchers invest in teachers with our research while encouraging educational equity. ALER members have conducted research and published a plethora of articles and books in addressing literacy areas such reading strategies to address comprehension and vocabulary, writing, disciplinary, technology and new literacies. Our work has also informed pedagogical and curriculum decisions. ALER members have also researched and disseminated best practices on prior knowledge, guided reading, fluency and teaching children in poverty. In addition, the members have shared ways to select and use appropriate student-centered materials and resources. Our work also interrupts the practices of teachers and evokes them to improve their instructional practices while encouraging reflective thinking. ALER members don't just publish their research, but this important information is shared with teachers during conference presentations, ongoing professional development, webinars, and in-class literacy coaching. Based upon my observations, Literacy Coaches have improved their practices while they support classroom teachers; these teachers meaningfully and effectively implement new instructional strategies. We also share our research-based practices with undergraduates and graduates during their course work; undergraduate students, master and doctorate level students are better prepared to serve as educators because of our research and its translation into practice.

The Goals of ALER Support Teachers

A quick review of our goals reveals the nature and depth of teacher support:

- To stimulate the self-development and professional growth of teachers and reading specialists at all educational levels.

- To encourage the continuing improvement of college and university curricula and encourage preparation programs for teachers and reading specialists.
- To encourage the continuing improvement of administrative, clinical, diagnostic, and instructional practices related to the learning process.

ALER supports the growth of teachers' knowledge via our publications:

- *Literacy Research and Instruction*;
- *ALER Yearbook* (Themed for Each Conference); –
- White Papers addressing relevant and timely topics; and
- Exploring Adult Literacy – A Division Publication.

We have a history of attention to supporting the transition of research into practice with the following foci:

- Assist Teachers in Making Instructional Shifts by Shaping and Refining Skills
- Highlights Effective Literacy Strategies
- Highlights Effective Instructional Routines
- Promote Productive and Effective Professional Learning Communities (PLCs) as Professional Development
- Support Appropriate Materials Decisions

An education system is impactful when it includes quality and equality. While demographics should not play a role in deciding if students receive the necessary skills needed to move forward in his or her academic achievement, it does, and has for many years. ALER members serve as advocates for students' education and their teachers while we positively impact students' literacy acquisition and enhancement while disseminating research findings.

The Challenge

There is no doubt that education is a powerful tool; therefore by providing a system of quality and equality, our diverse students will have the opportunity to become highly successful individuals while also serving their communities. I challenge ALER members to continue to conduct research with a social justice

lens and agenda. I also encourage the members to share this research with other educators and teachers in an effort to implement these best practices in the classroom. If our research is to make a difference and support the social justice movement, it must be disseminated so that it promotes effective practice and reaches those working with our students daily. *I believe that education is the civil rights issue of our generation. And if you care about promoting opportunity and reducing inequality, the classroom is the place to start. Great teaching is about so much more than education; it is a daily fight for social justice (Duncan, 2009).*

References

- Center for Public Education. (2005, Nov. 1). Teacher quality and student achievement: At a glance. Retrieved from [http://www.ed.gov/news/speeches/call-service-lecture-harvard-university](http://www.centerforpubliceducation.org/Main-Darling-Hammond, L., Bransford, J., & LePage, P. (2005). Introduction. In Darling-Hammond, L. & Bransford, J. (Eds.), <i>Preparing teachers for a changing world: What teachers should learn and be able to do</i> (pp. 1-39). San Francisco, CA: Jossey-Bass.</p><p>Duncan, E. (2009, Oct. 9). Call to service. Lecture at Harvard University. Retrieved from <a href=)
- Freire, P. (2000). *Pedagogy of the oppressed*. New York City, NY: Continuum International Publishing Group.
- Hyland, N. (2010). Social justice in early childhood classrooms. *Young Children*, 65(1), 82-90.
- Mubarak, R. (2014, June 26). Teachers are an important facet of society. Retrieved from <https://www.readfoundation.org.uk/blog/importance-teachers-our-society>
- Nye, B., Konstantopoulos, S., & Hedges, L. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis*, 26(3), 237-257.
- Pearson, P. (1996). Six ideas in search of a champion. What policymakers should know about the teaching and learning of literacy in our schools. *Journal of Literacy Research*, 28(2), 302-309.
- RAND Education. (2012). Teachers matter: Understanding teachers' impact on student achievement. Santa Monica, CA: RAND Corporation. Retrieved from http://www.rand.org/pubs/corporate_pubs/CP693z1-2012-09.html
- Sanders, W. & Rivers, J. (1996). Cumulative and residual effects of teachers on future student academic achievement. *Research Progress Report*. Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center.

PREPARING EDUCATORS WHO MAKE A DIFFERENCE IN OUR DIVERSE COMMUNITIES

GENERAL ASSEMBLY SPEAKER

Patricia A. Edwards
Michigan State University

When Dr. Julie Kidd invited me to serve as the General Assembly Speaker at the Association of Literacy Educators and Researchers in November 2015, I wondered how I would address the topic of preparing educators who make a difference in our diverse communities. In preparing my talk, I recognized that there was a wide spectrum of diversity that existed. However, if I attempted to cover this wide spectrum of diversity in my talk, I would be unable to do it in the hour allotted to me. Consequently, I made the decision to focus my talk on cultural diversity.



Teachers have a responsibility to all their students to ensure that all have an equal opportunity to achieve to the best of their abilities. American schools have held the promise of equal opportunity for generations of children. The guarantee of educational equity for all Americans, regardless of background or circumstance, is presumed to ensure a fair chance at economic and social opportunity—where all have equal access to learn, achieve, and demonstrate what they can attain through perseverance, hard work, and determination. Opportunity, equality, and individual effort are the mantras of American educational mythology.

Despite the inequity African Americans faced in segregated America, African American teachers in segregated schools worked tirelessly to level the playing field for African American children. Looking back on my childhood, it was a time where teachers did not need to be prepared to teach in diverse communities, as teachers were teaching students just like them.

A Time When Teachers Did Not Need to Be Prepared to Teach Diverse Students or Interact with Diverse Communities

Black Teachers and the Struggle for Racial Equality

I entered kindergarten a few years after the 1954 U.S. Supreme Court's landmark decision *Brown v. Board of Education*, which declared segregation in education unconstitutional. But until 10th grade, I attended segregated schools. I had black teachers only who worked in dismal, unfair, discriminatory situations and had outdated and inferior textbooks, supplementary materials, equipment, and resources. However, many researchers (e.g. Fairclough, 2007) have shown that even though black teachers in the segregated South worked in dismal, unfair, and discriminatory situations, they did not allow themselves to become victims of their environments. Instead, they viewed themselves as trained professionals who embraced a series of ideas about how to teach black children.

At the same time, black educators were expected to fulfill an array of roles beyond that of school teacher: "public health workers, Sunday school teachers, home visitors, agricultural experts, fundraisers, adult literacy teachers, racial diplomats, moral examples, all-around pillars of the community, and general up lifters of the race" (Fairclough, 2007, p. 14). Fairclough argued that black educators, though they rarely challenged segregation, played a significant role in combating white supremacy and promoting black equality through their role as educators of black children. Black teachers viewed themselves as the ones who could make a big difference in molding the lives, hopes and dreams of generations of black youth.

Teachers were able to communicate both with the student at the interpersonal level and to the student at the level of academic content. With any subject, they were able to introduce experiential relevancy to convert sometimes boring content into a lesson about life. For example, I remember my teacher constantly saying that black people can be great mathematicians. She would say with great pride, "Benjamin Banneker is a black man and he learned to write and do arithmetic. His background in math helped people learn how to work on and repair watches and clocks. He read books on astronomy and mathematics

as well as about instruments for observing the stars. Benjamin Banneker taught astronomy and advanced mathematics. And, boys and girls you can become a great mathematician just like Benjamin Banneker. In fact, don't let anyone tell you what you can't be or can't do. Benjamin Banneker believed in himself and you should believe in yourselves."

My Memories of my Experiences in Segregated Schools

My teachers taught us to be proud of being black and that the color of our skin wasn't a hindrance, but that we represented a race of people from African descent that came from kings and queens. My teachers connected with my classmates and me and conveyed to us the urgent value of getting an education. "If you get an education," said my teachers, "nobody can take it away from you."

From my vantage point, segregated schools were Afrocentric schools; teachers and students were one people in a struggle against racism. And, indeed, the schools I attended prior to integration had many examples of what is now called Afrocentrism. The Afrocentrism of my days in segregated schools reflected, naturally, what we today call "culturally relevant teaching" (Ladson-Billings, 1995). In these schools, we experienced "good teaching," as Ladson-Billings (1995) would say, but it wasn't "just good teaching" . . . it is more than that" (p. 159). Black teachers shared an unspoken understanding of our struggles, goals, pride, and perseverance as a race. Many of my black teachers came from poor backgrounds and understood the range of the black students in their classrooms.

A Time When Teachers Needed and Should Have Been Prepared to Teach Diverse Students and Interact with Diverse Communities

My Experiences at Albany High School

During my 11th-grade year, I was thrust into the Civil Rights Movement when I was transferred to an integrated school. I was a member of the second group of black students to transfer to Albany High, an all-white high school. My experiences at the all-white high school were filled with what McMillon (2001) described as victories, setbacks, tensions, overt acts of racism, and hypocrisy.

The summer prior to my junior year, my mother and father told me that they had received a letter from the school board office indicating that a "freedom of choice" plan was in effect. At that time, these plans were common integration tools used by school districts across the South.

I can vividly recall the first day. I caught the bus at the all-black high school to be driven the ten miles to all-white Albany High School. While on the bus, I experienced a range of emotions: excitement, nervousness, fear, doubt, and wondering whether I had made the right decision. When I arrived at Albany High, I was horrified to learn that no two black students would be assigned to the same class during the same time period. In other words, I would be the only black student in all of my classes.

My Albany High School teachers could have benefited greatly from some diversity preparation in their teacher education program. They did not seem familiar with the concept of “culturally relevant teaching” (Ladson-Billings, 1995). However, at Albany High School, there was the view that you came to our school, you adjust to us. We don’t have to adjust to you. Since most of the black students who attended Albany High were well acquainted with what DuBois (1903) called “double consciousness”, we managed to survive and even thrive. Trent & Artiles (1995) revealed

When Black children entered integrated schools, they were met generally by White administrators and teachers who were unprepared to deal with their cognitive styles, social values, beliefs, customs, and traditions. Because of the discontinuity that developed overnight between home and school cultures, these personnel began teaching Black children with preconceived notions and stereotypical views about how they functioned. (p. 29)

My Experiences at Albany State University

I attended Albany State University, a small black teachers’ college in the South. We were constantly reminded of how important my role would be as a black educator in the lives of boys and girls of color. My professors often informed me that black students needed to see positive role models in the classroom. Specifically, they needed teachers who understood something about their cultural heritage and background as well as their learning styles.

My professors, who themselves had only taught in segregated settings and were unsure of what it meant to teach in integrated settings, cautioned me that before I completed my undergraduate education I would be faced with the challenges of teaching in such settings. They warned that I would not only have to build a learning community for students of color, but for a diverse group of learners as well. However, even though they stressed the importance of being the best and brightest teacher and the importance of knowing your subject-matter they did not prepare me to work in diverse settings, as they did not emphasized the importance of culturally relevant pedagogy.

Questioning the Relevancy of Multicultural Education

My Experiences Teaching at the University of Wisconsin-Madison

Carl Grant proposed to the faculty members that courses in our teacher education program move toward a multicultural perspective in order to prepare our preservice and inservice teachers to teach diverse students more effectively. However, this idea met with resistance. Many of the faculty members stated that if you are a “good teacher,” you should be able to teach everybody’s child, so they did not believe that “special” training for multicultural education was necessary. However, Grant, like Ladson-Billings (1999), stressed that multicultural education was more than just good teaching and teachers needed knowledge to teach a diverse student population. To move his colleagues at UW-Madison and other teacher educators all of over the country to seriously consider multicultural education, Grant began working with National Council for Accreditation of Teacher Education (NCATE) to incorporate multicultural education as part of teacher certification.

Teacher Training and Multicultural Education

The preparation of teachers for diverse populations has been the subject of a growing body of research (e.g. Cochran-Smith et al. 2003; Grant & Secada, 1990; Haberman, 1996). However, as Cochran-Smith, Davis and Fries (2003) pointed out, basic changes in teacher education about multicultural education have not occurred despite 35 years of research. Part of the problem may be the lack of an articulated knowledge, as we know little about the expertise needed to mentor novices on equity and diversity, and we have little empirical evidence identifying how such a knowledge base is enacted (Achinstein & Athanases, 2006).

Another reason that Multicultural Education lacks relevancy may be due to the fact that most teacher educators professed to understand it (even if they knew little or nothing about it), because policy mandated the inclusion of multicultural content within their courses (Sleeter & Grant, 1994). Banks (1995) argued “. . . if multicultural education was to become better understood and implemented in ways more consistent with theory, its various dimensions must be more clearly described, conceptualized, and researched” (pp. 3-4). Thus, to help teacher educators, Banks (1995) revealed that five dimensions of multicultural education needed to be in place for teachers to teach more effectively. These concepts consisted of *content integration*, *the knowledge construction process*,

prejudice reduction, equity pedagogy, empowering school culture and social structure. Additionally, Milner (2010) argued that preparing teachers is about supporting them as they build a repertoire of knowledge and confront their attitudes, mindsets, and belief in order to gain skills that will help them be successful in any multicultural classroom. He believed these needed to be addressed and changed when necessary, as one's mindset, thinking, belief systems, attitudes, and overall understanding of the teaching and learning are what shape both the curriculum and instructional practices.

Questions raised by Banks (1995), Milner (2010), Cochran-Smith (2003) and other multicultural theorists shifted discussions on multicultural education from a *concept* to a *commitment* leading educators to understand the importance of acknowledging and integrating students' cultural backgrounds into the teaching and learning process. With a shift in thinking toward a *commitment* to multicultural education, cultural relevance as pedagogical and instructional concepts gained increasing attention among teacher educators and literacy researchers (Au, 1980; Mohatt & Erickson, 1981; Gay 2010). However, Lazar, Edwards and McMillon (2012) argued that:

Teachers for social equity know they cannot change these things without help from many corners of society, but they do their part by: 1) seeing students' inherent literate capacities, 2) helping students realize their fullest literacy potential, and 3) challenging the policies and practices that undermine students' literacy achievement. They not only assess students' literacy abilities and use this information to inform instruction, but they also assume a political orientation to literacy teaching where issues of race, class, culture, literacy, language, and teaching intersect (p. 22).

Cochran-Smith (2003) suggested that teacher educators ask key questions related to diversity, ideology, knowledge, teacher learning, practice, outcomes, coherence, and recruitment/selection when developing a multicultural teacher education program. The questions raised by Cochran-Smith pushed teacher educators to inquire: (1) How do teachers learn to teach diverse student populations, and what, in particular, are the pedagogies of teacher preparation (e.g., course work assignments, readings, field experiences) that make this learning possible? (2) What are the competencies and pedagogical skills teachers need to teach diverse populations effectively? This included teachers' roles as members of school communities, as school leaders, and as theorizers of practice as well as their responsibilities to families and students.

In teacher education programs and curricula, issues of diversity have generally been separated from the rest of teacher education. Often diversity has been addressed in optional or add-on “diversity” or “multicultural” courses (Ladson-Billings, 1995a; Zeichner & Hoeft, 1996), whereas the rest of the teacher education curriculum has remained unchanged (Gollnick, 1992; Villegas & Lucas, 2002). Often the pedagogy of teacher education, particularly as played out in method courses and fieldwork experiences, has been separated to a great extent from the foundations of teacher education (Villegas & Lucas, 2002). Although the last decade has seen a fairly consistent call from multicultural curriculum theorists for teacher preparation that challenges the ideological and epistemological underpinnings of traditional programs (Ladson-Billings, 1999; Sleeter, 2001a; Weiner, 2000), it is clear that multicultural teacher education envisioned by the theorists is not in place in practice.

The Time is Here for Teachers Educators to Implement Strategies That Make a Difference for Our Diverse Students and Improves Interactions with Diverse Communities

Why has the preparation of teachers for diverse populations not impacted practice? I have a few answers. One of the most prominent efforts to bring about educational reform during the last three decades in the U.S. came from a group of one hundred deans at leading colleges of education who called themselves the Holmes Group. This organization proposed a wide-ranging agenda for transforming teacher education and restructuring teacher roles within schools, expressing these ideas in two major reports: *Tomorrow's Teachers* (1986) and *Tomorrow's Schools* (1990). I joined the faculty members at Michigan State University at the height of this educational reform movement and added my voice to these conversations. One of the slogans for the Holmes Group was “teaching for conceptual understanding”. I argued that focusing on family issues would help preservice teachers come to understand that “teaching for conceptual understanding” was important, but it was equally important for preservice teachers to conceptually understand something about the parents and children who are their primary customers. I suggested that improving school, family, and community partnerships should be a part of every school improvement plan. Educators were responsible for writing a plan for partnerships, just as they wrote plans for improving reading, writing, math, testing and other essential components to create excellent schools

and responsive classrooms. Preservice education programs prepared prospective teachers to enter the profession with up-to-date knowledge, skills, tools, and approaches to school, family, and community partnerships (Epstein, 2001). The responsibility for preparing teachers to work with families fell squarely on the shoulders of teacher educators (Williams, 1992).

The authors of the Holmes Group Report “Tomorrow’s Schools”(1990) admitted that student [and parent] diversity has received inadequate or inappropriate attention by school and university faculty members, most of whom entered education with little personal experience of people different from themselves. The problem is compounded, by the perception of schools as the sole source of knowledge (Kochan & Mullins, 1992). Many parents, teachers, administrators and teacher educators fail to consider the integration of the home, school, and other environmental factors as the basis of a fusion of knowledge. Kochan & Mullins (1992) observed that “Teachers are not prepared to detect, nor deal with, differences that might exist between the family and the school. . . . In addition, teacher educators expressed concern that they were not adequately informed about families to address these concerns in their classes” (p. 272).

All too often this lack of shared background has made it difficult for teaching staffs to connect subject matter to the lives of their students. The inability of teaching staffs to understand the lives, histories, or cultures of communities different from theirs is a factor that has it made difficult to connect home and school literacies. Researchers like Florio-Ruane (1994) have captured the essence of why preservice teachers need to learn how to work with culturally different children and their families. In noting that [preservice teachers] themselves were generally “successful pupils” in school and entered the institution “familiar with its literacy practices,” she suggested that such teachers may have difficulty finding “instructional ways to assist youngsters making the transition from home to school” (p. 53).

Unfortunately, some administrators, teachers, policymakers, and researchers frequently cite low levels of parent involvement as evidence that parents don’t care about their children’s education or lack the ability or knowledge to support their children’s learning, but others claim that the blame for low levels of parent involvement cannot be assigned to parents alone. Mapp (1997), for example, argued that “cultural, racial and economic differences between school staff and parents” (p. 36) are at the root of the misconceptions about parents’ educational and family values.

To emphasize Mapp’s point about the root of misconceptions about parents, I provide two examples. When teachers at Donaldsonville Elementary School asked poor and minority parents to “read to their child”, they assumed

that parents knew what they meant. Unfortunately, many of the parents did not (Edwards, 1992). When the parents didn't seem willing to do as the teachers asked, teachers mistook parents' unfamiliarity with the task being asked of them, coupled with low literacy skills, for lack of interest in their children's education.

At Kendon Professional Development School, I encouraged the teachers to collect parent stories, narratives gained from open-ended interviews, so that they could get an in-depth understanding of how parents constructed literacy learning for their children at home. In these interviews parents respond to questions designed to provide information about traditional and nontraditional early literacy activities and experiences that have happened in the home.

Closing Remarks

Whether teachers work in the U.S. or anywhere in the world, one thing is certain. Teachers face diversity. Diversity is not only a challenge for teachers of European ancestry but for all teachers who encounter children with characteristics and backgrounds different from their own. African Americans teach Mexican American children, able-bodied teachers teach children with physical disabilities, Puerto Ricans teach Irish American children, and teachers fluent in English instruct children fluent only in Cantonese, and middle-class teachers serve children who are poor. Even when teachers and young children share a common cultural, linguistic, ethnic, racial, or social class background, they may not be able to translate their own experiences into effective educational practices that benefit children.

Thus, classroom teachers must face the reality that they will most likely teach students who come from different cultural, ethnic, linguistic, racial, and social-class backgrounds than their own. Additionally, preparing educators who make a difference in our diverse classrooms, I believe must include helping teachers learn how to work with families (Edwards, 2016). Delpit (1995) explained it best when she stated,

Teachers cannot hope to begin to understand who sits before them unless they can connect with the families and communities from which their children come. To do that it is vital that teachers and teacher educators explore their own beliefs and attitudes about non-white and non-middle class people. (p. 209)

Exploring such beliefs is not something teachers or teacher educators have routinely embraced. However, now is the time!

References

- Achinstein, B., & Athanases, S. (Eds.). (2006). *Mentors in the making: Knowledge, challenges, and practices in mentoring new teachers*. New York City, NY: Teachers College Press.
- Au, K. (1980). Participation structures in a reading lesson with Hawaiian children: Analysis of a culturally appropriate instructional event. *Anthropology and Education Quarterly*, 11(2), 91-115.
- Banks, J. (1995). Multicultural education: Historical development, dimensions, and practice. In J. A. Banks and C. A. McGee Banks (Eds.), *Handbook of research on multicultural education* (pp. 3-24). New York City, NY: MacMillan.
- Brown v Board of Education*, 347 U.S. 483 (1954).
- Cochran-Smith, M. (2003). The multiple meanings of multicultural teacher education: A conceptual framework. *Teacher Education Quarterly*, 30(2), 7-26.
- Cochran-Smith, M., Davis, D., & Fries, M. (2003). Multicultural teacher education: Research, practice and policy. In J. A. Banks & C. M. Banks (Eds.), *Handbook of research on multicultural education* (pp. 931-975). San Francisco: Jossey-Bass.
- Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom*. New York City, NY: The New Press.
- Du Bois, W. (1903). *The souls of Black folk*. New York City, NY: Bantam Classic.
- Edwards, P. A. (2016). *New Ways to Engage Parents: Strategies and Tools for Teachers and Leaders, K-12*. New York City, NY: Teachers College Press.
- Edwards, P. A. (1992). Involving parents in building reading instruction for African-American children. In Literacy and the African-American Learner Special Issue of *Theory into Practice*, 31(4), 350-359.
- Epstein, J. L. (2001). *School, family, and community partnerships*. Boulder, CO: Westview.
- Fairclough, A. (2007). *A class of their own: Black teachers in the segregated south*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Florio-Ruane, S. (1994). The future teachers' autobiography club: Preparing educators to support literacy learning in culturally diverse classrooms. *English education*, 26(1), 52-66.
- Gay, G. (2010). *Culturally responsive teacher: Theory, research & practice* (Second Edition). New York City, NY: Teachers College Press. *Teacher Educator*, 36(1), 1-16.
- Gollnick, D. M. (1992). Understanding the dynamics of race, class, and gender. In M. E. Dilworth (Ed.), *Diversity in teacher education: New expectations* (pp. 63-78). San Francisco, CA: Jossey-Bass Publishers.
- Grant, S. & Secede, W. (1990). Preparing teachers for diversity. In W. R. Houston, M. Haberman, & J. Sikula (Eds.), *Handbook of research on teacher education* (pp. 403-422). New York City, NY: Macmillan.
- Haberman, M. (1996). Selecting and preparing culturally competent teachers for urban schools. In J. Sikula, T. Buttery, & E. Guyton (Eds.), *Handbook of research on teacher education* (2nd ed., pp. 747-760). New York City, NY: Macmillan.

- Kochan, F. & Mullins, B. K. (1992). Teacher education: Linking universities, schools, and families for the twenty-first century. In L. Kaplan (Ed.), *Education and the family* (pp. 266-272). Boston, MA: Allyn and Bacon.
- Ladson-Billings, G. (1999). Preparing teachers for diverse student populations: A critical race theory perspective. In A. Iran-Nejad & D. Pearson (Eds.), *Review of research in education* (Vol. 24, pp. 211-248). Washington, DC: American Educational Research Association.
- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory Into Practice*, 34(3), 159-163.
- Ladson-Billings, G. (1995a). Multicultural teacher education: Research, practice, and policy. In J. A. Banks & C. M. Banks (Eds.), *Handbook of research on multicultural education* (pp. 747-761). San Francisco: Jossey-Bass.
- Lazar, A., Edwards, P., & McMillon, G. (2012). *Bridging literacy and equity: The essential guide to social equity teaching*. New York City, NY: Teachers College Press.
- Mapp, K. (1997). Making family-school connections work. *The Education Digest*, 6(4), 36-39.
- McMillon, G. T. (2001). *A tale of two settings: African-American students' literacy experiences at church and at school*. Unpublished doctoral dissertation, Michigan State University, East Lansing.
- Milner, H. R. (2010). What does teacher education have to do with teaching? Implications for diversity studies. *Journal of Teacher Education*, 60(1/2), 118-131.
- Mohatt, G. & Erickson, F. (1981). Cultural differences in teaching styles in an Odawa school: A sociolinguistic approach. In H. Trueba, G. Guthrie, & K. Au (Eds.), *Culture and the bilingual classroom: Studies in classroom ethnography* (pp. 105-119)., Rowley, MA: Newbury House.
- Sleeter, C. (2001a). Epistemological diversity in research on preservice teacher preparation for historically underserved children. In W. Secada (Ed.), *Review of research in education* (Vol. 25, pp. 209-250). Washington, DC. American Educational Research Association.
- Sleeter, C. & Grant, C. (1994). *Making choices for multicultural education: Five approaches to race, and gender*. New York City, NY: Macmillan Publishing Company.
- Tomorrow's schools of education: A report of the Holmes group* (1990). Retrieved from <http://files.eric.ed.gov/fulltext/ED399220.pdf>
- Tomorrow's teachers: A report of the Holmes group* (1986). Retrieved from <http://files.eric.ed.gov/fulltext/ED270454.pdf>
- Trent, S. & Artiles, J. (1995). Serving culturally deprived students with behavior disorders: Broadening current perspectives. In J. M. Kauffman, J. W. Lloyd, T. A. Asturo, & D. P. Hallahan (Eds.), *Issues in the educational placement of pupils with emotional or behavioral disorders*, (pp. 215-249). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Villegas, A. M. & Lucas, T. (2002). *Educating culturally responsive teachers: A coherent approach*. Albany, NY: SUNY Press.

- Weiner, L. (2000). Research in the 90s: Implications for urban teacher preparation. *Review of Educational Research*, 70(3), 369-406.
- Williams, Jr., D. L. (1992). Parental involvement in teacher preparation: Challenges to teacher education. In L. Kaplan (Ed.), *Education and the family* (pp. 243-254). Boston, MA: Allyn and Bacon.
- Zeichner, K. & Hoeft, K. (1996). Teacher socialization for cultural diversity. In J. Sikula, T. J. Buttery, & E. Guyton (Eds.), *Handbook of research on teacher education* (2nd ed., pp. 525-547). New York City, NY: Macmillan.

TRANSNATIONAL RELIGIOUS PRACTICES: FUNDS OF KNOWLEDGE FOR LITERACY LEARNING

AWARDS BREAKFAST KEYNOTE SPEAKER

Catherine Compton-Lily
University of Wisconsin Madison

Catherine Compton-Lilly, Professor in Curriculum and Instruction at the University of Wisconsin Madison, teaches courses in literacy studies and works with professional development schools in Madison. Dr. Compton-Lilly engages in longitudinal research projects. She has authored articles in the Reading Research Quarterly, Research in the Teaching of English, The Reading Teacher, The Journal of Early Childhood Literacy, and Language Arts. Additionally, she is the author of Reading Families: The Literate Lives of Urban Children (Teachers College Press, 2003), Confronting Racism, Poverty and Power (Heinemann, 2004), Rereading Families (Teachers College Press, 2007), the editor of Breaking the Silence (International Reading Association, 2009), and co-editor of Bedtime Stories and Book Reports: Complexities, Concerns, and Considerations in Fostering Parent Involvement and Family Literacy (Teachers College Press, 2010). She conducted the research that is the focus of her talk with Jieun Kim, Erin Quast, Sarah Tran, and Stephanie Shedrow.



In this paper, I highlight a portion of our team's work exploring the transnational funds of knowledge that accompany religious literacy practices for children in immigrant families. Drawing on longitudinal case studies with ten families that we have worked with for over three years, we argue that these transnational literacy practices are an important fund of knowledge that many children in immigrant families bring to schools and classrooms. Unfortunately, like many of the funds of knowledge that children in historically underserved communities bring to schools, these funds of knowledge can be invisible to teachers, particularly novice teachers. We argue that recognizing and building on the funds of knowledge that children bring to classrooms is an important area of study for preservice teachers. In the conclusion section of this article, we offer suggestions for working with preservice teachers that will not only help them to recognize these funds of knowledge but also to be able to incorporate them into their future classrooms.

For the purpose of our analysis, transnational religious practices include interactions with religious texts that extend across international borders. While these practices can entail both traditional (i.e., homes, churches, temples, mosques) and virtual spaces (e.g., websites, blogs, chat rooms), by definition they involve interaction and communication with people in other places in the service of practicing, learning, and engaging with religion and religious texts.

While various scholars have maintained that religious spaces can serve as important sites of literacy learning and use, we extend this conversation to recognize how religious practices provide significant sites of transnational literacies (i.e., Sánchez, 2007). Although we use "religious" as an adjective, we perceive religious practices to operate as verbs (Gutiérrez, 2008); they are constantly enacted and therefore fluid. Religious knowledge and traditions shift over time as families engage with traditional practices in novel contexts and with new communities, ultimately giving rise to revised and reworked religious practices. These purposeful literacy practices have three relevant dimensions. First, and perhaps most relevant to families, is that children are engaged in religious, cultural, and often linguistic practices that are important to families. Second, as argued by earlier literacy scholars (Baquedano-Lopez, 1997; Ek, 2008; Heath, 1989), religious practices provide significant spaces for children's literate, and often biliterate or multiliterate development. Finally, as we maintain in the current paper, religious literacy practices are an important site of transnational engagement for young children, ages 5 through 8. Religious literacy practices are deeply connected to transnational networks that include family members, friends, and religious leaders; these networks often invoke native cultures, languages, and beliefs that are highly significant to the families. Unlike new reports that focus on unnamed people around the globe, transnational religious networks involve trusted

others – real people who share affinities with families. In short, young children are engaged in relationships with significant others that transcend the local and involve learning and thinking about global communities in ways that are generally unavailable to children in mono-national American households.

Families Religious Literacy Practices

Literacy researchers (Baquedano-Lopez, 1997; Ek, 2008; Heath, 1989) have revealed religious spaces as important sites of literacy learning. Ek (2008) worried that the lack of recognition of religious literacy practices and knowledge negated an important fund of knowledge for many children in immigrant families. She noted that lack of attention to children's out-of-school educational and literacy experiences, including those related to religion has resulted in a failure to leverage these experiences to support children's learning in classrooms. Significantly, Ek (2008) worried about the "increasingly xenophobic social and political context [that] further complicates the education and achievement of immigrant students" (p. 4).

Heath (1989) also identified church as an important space of literacy practice for both children and adults. She noted that religious participation often involved not only the use of religious texts but also the reading and writing of communicative and legal documents. She highlighted the various literate roles that adults played in the operation of the church (i.e., reading and writing newsletters, announcements, calendars) and in religious practice (i.e., reading gospel, hymnals, prayers). Attesting to the significance of religious literacy practices for children, Dickie and McDonald (2011) found that when given a camera, Samoan New Zealander children often took pictures of religious texts and objects.

Ek (2008) highlighted the significance of culturally aligned school and religious practices for a Mexican American high school student. Specifically, she noted the fluent use of Spanish at church as well as the tendency to read texts aloud and incorporate music. Ek (2008) recognized the propensity of the practices found in the Spanish church to validate the language practices and identity positionings that Mexican-American students brought to learning. Thus understanding the religious literacy practices of children, particularly those that involve instructional activities, offers possibilities for teachers who may want to build on these funds of knowledge (Gonzalez, Moll, & Amanti, 2005).

Other literacy scholars (Haight, 1998; McMillon & Edwards, 2000) have focused on the role religious practices play in the learning experiences of African American children. McMillon and Edwards (2000) examined how an African American student was differently successful at school and at Sunday school.

They identify particular practices that surrounded literacy learning in these two sites and interrogated the expectation that young children be expected to negotiate these differences. Haight (1998) highlighted the important contributions that religious spaces make to children's socialization and their development of resilience. Both of these studies recognized differences between church and school spaces, alongside a discourse of possibility rooted in the promise of building on religious spaces to organize and refine school learning.

While also recognizing differences among practices at school/church and native country/current country, Dickie and McDonald (2011) highlighted similarities and children's abilities to negotiate these differences. They reported that children in their study explained to researchers that "they were quite capable of compartmentalizing their lives according to family, church, school and popular culture, and behaving appropriately in each site" (p. 30). Rather than dwelling on differences and barriers, Dickie and McDonald (2011) recognized religious spaces as sites of possibility while honoring the active and agential capacities of children. In short, they highlighted the fluid and flexible nature of children and their literacy and learning practice as they crossed instructional spaces.

Duranti, Ochs, and Ta'ase (1995) focused specifically on how texts were used with children across religious spaces; their work highlights fluidity and flexibility across international borders. They described the use of the *Pi Tautau*, a large poster that displays the Samoan alphabet as well as Arabic and Roman numerals. The *Pi Tautau*, originally introduced by Christian Missionaries, was used in both Samoan and Samoan American religious classrooms. Highlighting the transnational nature of this instructional practice, they noted how this pedagogical practice informed how Samoan children living in the United States were introduced to reading and writing in the Samoan language. As they explained, this work "suggests that educational research needs to reconfigure the relation between home and school and between home and community. The boundaries of home need to be expanded historically and geographically to include places of origin in expressions such as 'back home'" (p. 72). Thus "home" referenced more than the families' current domiciles; home was also connected to native country and the transnational, cultural, linguistic, and pedagogical knowledges that extend across time and space.

Also highlighting flexibility and fluidity, Gregory and her colleagues (2012) documented the mobile and emerging nature of literacy and language learning of four children from immigrant families as they operated within four faith communities. Their work illustrated how "children actively combine, create, and recreate different narratives, using different languages and different cultural traditions" (p. 323). They described syncretism as a verb referencing

“the *creativity* resulting from the *reconciliation* of difference or as simply a *juxtaposition* or mixing together of different *contrasting* elements” (p. 324, italics in the original). They positioned children as active agents of syncretization. While their focus was on syncretization across home, school, and religious spaces, we build on their account to explore how religion operates as a conduit to connect home country and current country contributing to the development of transnational awareness among children in immigrant families.

Specifically, we explored the construction of transnational funds of knowledge that involve not just knowledge about the world, but also important insights about being human and the rational nature of people around the world. Specifically, we identify transnational literacy practices as a potential space for the emergence of cosmopolitanism. Contemporary scholars (Appiah, 2006; DeCosta, 2014; Hansen, 2010; Hawkins, 2014; Hull & Stornaiuolo, 2014) have identified cosmopolitan stances as entailing respect and mutual regard for people around the globe. Thus Cosmopolitanism references self as a global citizen and has been identified as an essential goal for 21st century educators.

In their seminal work, Hull and Stornaiuolo (2010) drew on Appiah’s discussion (2006) of *cosmopolitanism* as they explored the ways young people draw upon transnational resources as they negotiated “the tensions inherent in a vastly interconnected yet deeply divided world” (p. 87). Hull and Stornaiuolo (2010) identified the existence of cultural flows of ideas, beliefs, trends, music, and images that people accessed to understand their worlds and to construct identities within those worlds. They argued that children were surrounded by transnational and culturally infused flows of information that entailed communication via a vast range of media, modalities, and technological platforms (Hull & Stornaiuolo, 2010). They explained that engaging in transnational literacy practices across global contexts was becoming increasingly common, especially for young people; Guerra (2008) maintained that educators must work to recognize and draw upon students’ transnational experiences and knowledge as they design and implement instruction to support the development of global citizenship among their students.

In our analysis of religious practices, we draw on conceptualizations of cosmopolitanism (Appiah, 2006; DeCosta, 2014; Hansen, 2010; Hawkins, 2014; Hull & Stornaiuolo, 2014) that highlight how people come to view themselves as global citizens. As DeCosta (2014) explained, cosmopolitanism entails “keeping an open mind and holding others in mutual regard in an increasingly globalized world” (p. 10). DeCosta (2014) advocates for a global open-mindedness, a sense of international citizenship, and the awareness of differences in ideas, values, perspectives, and practices.

We note that these ways of understanding the world are both fluid and potentially fruitful as educators explore possibilities for supporting the development of global awareness and international empathy. We argue that transnational religious practices provide a particularly fertile site for the development of cosmopolitanism based on their deep connections to family, community, beliefs, culture and native languages. In the conclusion section of this article, we explore pedagogical issues that are significant when working with preservice teachers as we support them in preparing their students to become global citizens. This push towards cosmopolitan understandings of the world (Appiah, 2006; DeCosta, 2014; Hansen, 2010; Hawkins, 2014; Hull & Stornaiuolo, 2014) not only points to critical issues for educators, but also to the significance of the transnational funds of knowledge, rooted in religion, that children from immigrant families bring to classrooms.

The Longitudinal Study

This collective case study involves 10 children from immigrant families who have come to the United States from various parts of the world. This paper is based on the first three years of an ongoing study that is entering its eighth year. The students entered the study when they were in four-year-old kindergarten, kindergarten, grade 1, or grade 2. We located these children and their families through various social networks related to our work in local schools and community centers as well as our connections to international communities. The mid-sized Midwest City in which the research was conducted recently experienced a significant increase in the numbers of immigrant families, particularly those from Mexico and South America, while the local university attracts a significant Asian community.

During the first year of the project, we visited each child five times at home and school. In subsequent years, we visited three times. Each year, we collected data through observations, spoken data, and artifacts. We collected data that highlighted the spaces that immigrant families occupy or have occupied (i.e., home/neighborhood/ school, native country/country of residence). Parallel data sets were collected each year; thus, each year we invited children to complete similar tasks. For example, every year, we ask children to draw a self-portrait. This allowed us to explore both changes and continuity across time. Semi-structured interviews with children, parents, and teachers focused on children's school experiences, interests, literacy achievement, and literacy practices.

Over the three years, we coded interviews and field notes using a combination of *a priori* codes – based on the research questions we asked - and

grounded codes to explore children's experiences relative to literacy, identity, and schooling. Interviews and field notes were also subjected to a grounded analysis as we identified emerging patterns. Reflecting the children's transnational experiences – both physical and digital - the current analysis led to the identification of transnational spaces related to religion as well as insights related to the movement of religious texts and practices across international spaces.

Some transnational practices, especially those related to religion, were easily identifiable in the interview transcripts. The significance of transnational religious literacies were confirmed as we triangulated findings across student-taken photographs of homes and schools, self-portraits, and conversations about photographs from their home countries. These artifacts often included religious artifacts and texts and highlighting what the children viewed as significant in their lives.

Of the ten families discussed in this paper, six families are from Mexico, three are from Asian countries (Korea, China, and Nepal); the remaining family is from Morocco. During the first three years of the project, we welcomed research team members from Chile, China, Taiwan, Korea, Malaysia, Vietnam, and the United States. Several students on the team speak fluent Spanish and/or have resided in Central or South America. Interviews were generally conducted in English, although native languages are sometimes used when viable and requested by participants.

The Transnational Religious Practices of Children in Immigrant Families

Across the families, religious practices and literacies were enacted through transnational links. Some of these practices involved technology; others did not. In each case, family members engaged in negotiations that neither replaced nor abandoned traditional religious practices; instead, existing practices were extended, refined, and revisited through negotiations with local religious practices and often bolstered by the availability of digital resources.

Notably, transnational religious practices occurred within communal spaces including churches, heritage schools, community centers and online forums where children interacted with significant others in their lives. Specifically, these transnational religious practices often involved extended family, friends, and religious leaders – people who play significant roles in children's religious lives. Unlike the anonymous other – *nameless* people who we read about in newspapers - families' transnational religious practices involve people who are respected by families. Their views, perspectives, and experiences are not easily dismissed. Thus we argue that transnational religious practices can provide a

significant foundation for the development of global citizens who recognize the humanity of people around the globe.

Transnational religious practices are inherently social, inviting people to share, negotiate, construct and reconstruct religious practices while at the same time solidifying cultural and linguistic affiliations and practices (García-Sánchez, 2010). Through engagement in religious literacy practices, our focal families and their children drew upon transnational religious practices that were not always visible in mainstream spaces including schools.

It is essential to recognize that religious practices have long transnational histories. For example, the forms of Christianity that families from China, Korea, and Mexico brought to Northern Mid-Western America are rooted in Europe. In all eight families that self-identified as Christian, missionaries imported Christian practices to the families' native countries. This historical movement highlights religious practices as migratory long before the inception of the Internet. Specifically, as Christianity spread around the globe, Christian practices melded with local customs creating unique and localized versions. While transnational religious practices and accompanying literacies have a long history, digital tools have created new possibilities. Not only does digital technology provide resources to support religious practices but it also creates immediate transnational networks with people in other countries as native languages and cultural practices are shared globally among people who share religious, cultural, and linguistic backgrounds.

Below we describe some of the ways children in immigrant families engage in religious practices while living in Northern Mid-Western America. Specifically, we observed transnational religious practices being enacted in four ways: 1) displaying religious artifacts and the creation of religious spaces in homes; 2) accessing religious texts – both physical and digital; 3) using transnational literacy texts to support the children's first language; and 4) creating and participating in transnational religious spaces.

As we visited children's homes, we often noted displays of religious texts and artifacts. When asked to photograph significant things in his home, Carlos photographed a statue of the Virgin Mother alongside mementos of his favorite Mexican soccer team. Religion and sports appeared to be equally important perhaps reflecting his mother's insistence on religion alongside Carlos' father's interest on international soccer teams. Ali's living room wall features a large metal canvas that displays one hundred names for Allah. Ali's sister made a peace sign with her fingers as Ali snapped the picture (Figure 1). Lupita's home was adorned with Christian imagery. When she was in grade 1, Lupita took a picture of the crucifix hanging in her living room, which was accompanied by a simple drawing she had made of flowers and hearts (Figure 2).



Figure 1. A Hundred Names for Allah.

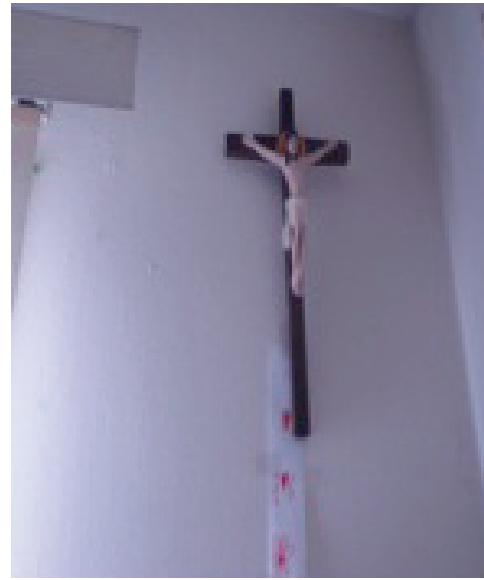


Figure 2. Crucifix and Lupita's Drawing With Peace Sign.

During the third year of the study Elena proudly showed a member of the research team a shrine displaying Nepalese artifacts and texts. This shrine was discretely nested in a closet. The appearance of this shrine coincided with a visit from Elena's grandmother from Nepal who was visiting the family for the first time.

In these examples, we witness families staking a claim in America by displaying texts, artifacts, and decorative items that have religious significance. In most cases these artifacts traveled with the families from their native countries or have been brought by compatriots when they visited the family. Children were aware of the significance of these religious artifacts and often chose to photograph them when asked to photograph things that were important.

Transnational religious practices are also evident as family members' accessed texts and materials needed to support their religious practices and beliefs. Families generally preferred to engage in religious practices using their native languages, which often entailed international connections. For example, each night James and his mother read stories from children's Bibles in both English and Mandarin. His mother used these stories to teach James Chinese characters. As James learned to read in English, he increasingly took turns reading the English texts. Together, they compared the Chinese and English versions of the Bible stories. In addition, Mr. and Mrs. Li also used the Internet to locate religious proverbs and teachings in Mandarin for themselves and their children.

Mrs. Li was pleased with the materials she located reporting that she found enough texts to “keep them [her children] learning for a year.” Mr. Li noted that the texts were written at a “very high level [of] Chinese” and thus led to thoughtful and stimulating family discussions. Similarly, Felipe described reading and discussing the Bible every night in his Mexican American family.

As Muslims, Ali’s family also accessed a multi-layered network – featuring both traditional and digital texts - to locate religious texts in both Moroccan Arabic and formal Arabic. Mrs. Barami used these materials to support Ali in learning, practicing, and memorizing the Qur’an. She showed members of the research team the book she used to help Ali learn to read and write in Arabic. The book was designed for novice readers and moved from pictures that adults could discuss with children to introducing Arabic letters. From there it introduced common letter combinations and simple words. The final sections of the 160-page book featured short stories followed by comprehension questions and spelling exercises in Arabic.

Ali’s mother described other religious books that she secured for herself and her children and stated, “I have the Qur’an and some *ahadith* (collections of the Prophet’s traditions). If you want to learn something about Islam, I check this book and I read the question what you can do [to learn more].” Mrs. Barami explained that these books addressed issues such as “What is *haram* (forbidden) and, what is not haram.” When her brother returned to Morocco each year, he brought her books. She explained, “He has a LOT [of books] because when he went to Morocco, EVERY time, he brings a LOT about Islamic studies.”

Significantly, these texts circulated beyond the family and into the Moroccan Arabic community. Mrs. Barami shared religious texts with her friends including “CDs about the Islamic studies” and woman’s magazines written in Arabic. She reported that she generally did not have time to read the magazines as seen in her following comment. “I told you when I have free time, I just do my homework [for learning English] and sometimes especially at the night, I want to read the Qur’an.” When Ali was in grade two, the family purchased a computer. Technology enhanced their ability to access texts and participate in online religious forums. In later interviews after the family had bought an iPad, Ali described an App that read Qur’anic passages aloud while displaying the Arabic texts. He used this App to memorize the Qur’an.

In addition to transnational religious practices being evident via the display of religious artifacts in homes, accessing religious texts, and maintaining the children’s first language, transnational religious practices are also key to creating and participating in local spaces with people who shared religious, cultural and

linguistic backgrounds. Several children including Liz, Carlos, Lupita, Ali, and James regularly attended religion classes.

At her Christian Korean Sunday school, Liz learned to read and write in Korean. She played traditional Korean games and enjoyed Korean food. In contrast to the Tomboy persona that Liz displayed in other contexts via her interest in sports and her attraction to the books read by the boys in her class including *Captain Underpants* series, Liz enacted traditional Korean gender roles including speaking Korean and enacting shyness as well as a reluctance to express strong opinions at Korean church events. Liz's pride in these traditional practices complicated our analysis of her self-portrait in which she depicted herself in torn blue jeans and surrounded by sports paraphernalia. We witness Liz successfully negotiating gender across two very different spaces – school and church – and doing it successfully. As Dickie and McDonald (2011) and Gregory et al. (2012) argued, rather than falling victim to mismatched expectations, we noted agency and resourcefulness as children negotiated roles and selves in multiple spaces. This fluidity and flexibility, was also evident in the case of Carlos negotiating sports and religion, and James revisiting Bible stories in English and Mandarin. These spaces of difference create opportunities for children to explore multiple ways of being, opening the door to cosmopolitan (Appiah, 2006; DeCosta, 2014; Hansen, 2010; Hawkins, 2014; Hull & Stornaiuolo, 2014) ways of thinking and being.

In addition to participating in transnational religious spaces, some families also created these spaces. Living in a large college town that attracted many Chinese-speaking students, Mr. and Mrs. Li established and hosted a Mandarin Bible study group in their home for Chinese students who attended the local university. In this group, they shared Christian literature - including the proverbs described above that they downloaded from the Internet - and provided the college students with religious guidance, home-cooked Chinese meals, and advice about American culture and life.

In other cases, traditional practices from the children's home countries were brought to America. When Ali was in second grade, he participated in a religious ceremony with his uncle who filled in for his father who had been detained in Morocco. In preparation for this ceremony, Ali was required to learn several prayers. Together, he and the other men at Mosque, slaughtered a sheep to celebrate *Eid ul-Adha*. Ali reported, "We said '*Bismillah*' (In the name of Allah) and cut the sheep's throat quickly with a sharp knife. My uncle cut out the stomach and took the inside organs out." As Ali proudly reported, "Now I'm a man."

Finally, some children were observed using religion to connect with family in their home countries. During grade 3, Carlos attended communion classes

at his Spanish-speaking church. That same year he wrote and published a book at school about playing soccer with his friends. While the book did not address religion, he included the following written dedication at the end of the book: “I dedicate this personal narrative to my family in Mexico because I would like them to read it.” In pencil, below the typed words, Carlos wrote, “God like’s the best.” Reflecting parallel themes of church and sports we witness a critical merging of religion, family, and sports and the invocation of Mexican, and American images.

Across the sample, we observed members of immigrant families displaying religious artifacts and creating religious spaces in their homes, accessing religious texts, using these transnational religious texts to support the children’s first language; and creating and participating in transnational religious spaces. While these practices are generally invisible to teachers at schools, we identify them as an important fund of knowledge (Gonzalez, Moll, & Amanti, 2005) that immigrant children bring to classrooms.

Conclusions

The case studies described above have revealed the ways transnational religious literacy practices serve as important sites of literacy learning and use. As revealed above, these practices are routinely enacted in families and are this always fluid and evolving. We have witnessed how religious knowledge and traditions shift over time as families engage with traditional practices in novel contexts and with new technology (i.e., Ali using his iPad to memorize the Qu’ran). We argue that these religious funds of knowledge are particularly significant as the religious, cultural, and linguistic practices that children engage with are important to families while also providing significant spaces for children’s literate, and often biliterate or multiliterate development. Specifically, these religious literacy practices are deeply connected to transnational networks that include family members and friends in native countries.

Like Haight (1998) and McMillon and Edwards (2000) we recognize the agency and fluidity with which children navigate religious spaces alongside school spaces. We also note the challenges that some children face in negotiating multiple spaces. Thus teachers must be agential in creating spaces for children to be who they are and to share their linguistic, cultural, transnational, and religious funds of knowledge in classrooms.

However, transnational religious funds of knowledge bring particular challenges for teachers. In short, schools in the United States generally discourage the use of religious texts within classrooms. Thus, directly drawing on religious texts in classrooms may not be possible. However, the complexities that accompany

these funds of knowledge do not deny their existence, nor do these complexities deny the potential of these funds of knowledge to contribute to the development of cosmopolitan stances. The existence of transnational religious literacies raises critical issues for teacher education.

First, pre-service teachers should become aware that many children bring transnational religious experiences to classrooms. These experiences range from interactions with religious texts and participation in religious communities to attending religious classes that often entail both cultural and linguistic practices associated with their families' native countries. These experiences should be recognized as important spaces of literacy learning for children.

Second, careful attention must be paid to how and when beliefs and texts that embody particular beliefs might be accessed and used in classrooms. There are times when stories and practices from other countries might be discussed and described. Children might explore how their families celebrate holidays. Storybooks might be used to introduce children to other ways of being and knowing. In general, preservice teachers will need guidance in making decisions about how to access children's religious funds of knowledge in ways that do not privilege particular beliefs or denigrate others.

In addition, children can be encouraged to tell their own stories. Children might author books about themselves and the things that are important to them. They might be encouraged to take photographs or draw pictures of things that are important to them in their homes. When children produce religious images, these can be celebrated and discussed.

But perhaps most importantly, preservice teachers can be assisted in highlighting universal values related to goodness, hope, caring, and kindness. While attending to the religious details of how these values are described and presented may not be permissible, children bring these universal values to classrooms. Children's literature is full of stories that exemplify these values.

While accessing transnational religious funds of knowledge in classrooms requires careful thought and planning, these funds of knowledge are significant in that they entail transnational relationships with significant others inviting immigrant children and other children in their classrooms to think globally and to engage in acts of global citizenship.

References

- Appiah, K. (2006). *Cosmopolitanism: Ethics in a world of strangers*. New York City, NY: Norton and Company.
- Baquedano-López, P. (1997). Creating social identities through doctrina narratives. *Issues in Applied Linguistics*, 8(1), 27-45.

- DeCosta, P. (2014). Reconceptualizing Cosmopolitanism in Language and Literacy Education: Insights from a Singapore School. *Research in the Teaching of English, 49*(1), 9-30.
- Dickie, J. & McDonald, G. (2011). Literacy in church and family sites through the eyes of Samoan children in New Zealand. *Literacy, 45*(1), 25-31.
- Duranti, A., Ochs, E., & Ta'ase, E.K. (1995). Change and tradition in literacy instruction in a Samoan American community. *Educational Foundations, 9*(4), 57-74.
- Ek, L. (2008/2009). Language and literacy in the Pentecostal church and the public high school: A case study of a Mexican ESL student. *High School Journal, 92*(2), 1-13.
- García-Sánchez, I. (2010). The politics of Arabic language education: Moroccan immigrant children's language socialization into ethnic and religious identities. *Linguistics and Education, 21*(3), 171-196.
- Gonzalez, N., Moll, L. C., & Amanti, C. (2005). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. New York City, NY: Teachers College Press.
- Gregory, E., Lytra, V., Choudhury, H., Ilankuberan, A., Kwapong, A., & Woodham, M. (2012). Syncretism as a creative act of mind: The narratives of children from four faith communities in London. *Journal of Early Childhood Literacy, 13*(3), 322-347.
- Guerra, J. (2008). Cultivating transnational citizenship: A writing across communities model. *Language Arts, 85*(4), 296-304.
- Gutiérrez, K. (2008). Developing a sociocritical literacy in the third space. *Reading Research Quarterly, 43*(2), 148-164.
- Haight, W. (1998). "Gathering the spirit" at First Baptist Church: Spirituality as a protective factor in the lives of African American children. *Social Work, 43*(3), 213-221.
- Hansen, D. (2010). Cosmopolitanism and education: A view from the ground. *Teachers College Record, 112*(1), 1-30.
- Hawkins, M. (2014). Ontologies of place, creative meaning making and critical cosmopolitan education. *Curriculum Inquiry, 44*(1), 90-112.
- Heath, S. (1989). Oral and literate traditions among Black Americans living in poverty. *American Psychologist, 44*(2), pp. 367- 373.
- Hull, G. & Stornaiuolo, A. (2010). Literate arts in a global world: Reframing social networking as cosmopolitan practice. *Language Arts, 54*(2), 85-97.
- Hull, K. & Stornaiuolo, A. (2014). Cosmopolitan literacies, social networks, and "proper distance": Striving to understand in a global world. *Curriculum Inquiry, 44*(1), 15-44.
- McMillon, G. & Edwards, P. (2000). Why does Joshua "Hate" school. . . Love Sunday school? *Language Arts, 78*(2), 111-120.
- Sánchez, P. (2007). Cultural authenticity and transnational Latina youth: Constructing a meta-narrative across borders. *Linguistics and Education, 18*(3), 258-282.

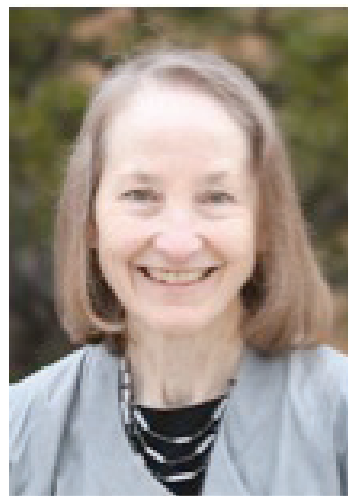
LITERACY: READING REDUX OR READING GONE?

LAUREATE AWARD WINNER

Mary F. Roe
Utah State University

Abstract

Recent times have seen an increase in the use of literacy, and in many cases, the substitution of literacy where reading was once the term of choice. A deep curiosity about these shifts by professional organizations, a range of stakeholders, and the program descriptions at institutions of higher learning led to this essay. It is guided by three specific intentions: (a) to explore the varying (and often overlapping) definitions of literacy and reading in order to establish their substantive and subtle differences, (b) to ponder the implications of selecting one term over another or using them in combination, and (c) to spark questions for future research that would further clarify literacy, reading, and their individual and combined importance for the education of our nations' youth.



Improving the reading achievement for all students (and adults) has long been a national (and international) priority. More frequently than in previous times, literacy replaces reading as the label to frame this goal. In fact, many professional organizations have rejected reading for literacy (e.g., from the College Reading Association to the Association for Literacy Educators and Researchers; from the

National Reading Conference to the Association of Literacy Researchers; and, perhaps most notably, the renaming of the International Reading Association to the International Literacy Association).

The highly regarded *Becoming a Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985) and influential National Reading Panel Report (National Institute of Child Health, & Human Development, 2000) maintained a clear focus on reading. More recent titles of professional texts (e.g., Alvermann, Gillis, & Phelps, 2012) and initiatives (e.g. National Institute for Literacy) put forward literacy. Even chapter titles in the most recent *Handbook of Reading Research* (Kamil, Pearson, Moje, & Afflerbach, 2011) uses literacy nine times as opposed to zero in their first edition (Pearson, Barr, Kamil, & Mosenthal, 1984).

This wavering between terms raises one's curiosity as to the real differences that accompany the selection of one word over the other. Several possibilities arise. First, perhaps reading as a concept is simply being restored and revitalized by a wider understanding of it (reading redux). Or second, perhaps reading stands in tension with literacy and is perceived as out of touch with the times and risks being supplanted (reading gone).

The exploration of these curiosities and possibilities guides this essay and sets forth three purposes for it: (1) to explore the varying (and often overlapping) definitions of reading and literacy – seeking to establish their substantive and subtle differences; (2) to consider the implications of selecting one term over another or using them in combination; and (3) to spark questions for future research that would further clarify reading, literacy, and their individual and combined importance for the education of our nation's youth.

Background

The roots for this manuscript began with my receipt of the Laureate Award from the Association of Literacy Educators and Researchers. My sheer joy in receiving this award immediately turned to fretting as I recalled that it comes with a conference presentation (and then a Yearbook manuscript). In settling on the direction of the presentation, I was influenced by Ronald Coase, who won a Laureate Award in Economics and used the thematic continuity of his work for his speech.

Following his lead, I began thinking about my career across my roles within K-12 education first as an English teacher and then as a reading specialist and finally at the university level with my appointments as a researcher and teacher educator. The idea that grabbed my attention involved my deep commitment to those students who most need a teacher to help them read better. Does using

literacy or reading change instruction to help these students? Is literacy just a new term or does it provide a more powerful instructional approach thus eliminating reading? Or, should literacy and reading definitions have a confluence of sorts in order to help these students? And my questions go on and on.

I am not alone in considering these terms. Diane Barone (2015), in response to a request to write about the changing definitions of literacy, dodged this complex question to talk about ways of thinking about literacy. Peter Freebody (2015) talked about the “changing field” (p. 10) with “reading becoming literacy” (p. 11) and then turned his comments to the inclusion of writing and a wider range of disciplines. Thus, I continue this exploration with my attention to definitions of literacy as an important backdrop for my consideration of their implications as a substitution for reading. I return to these definitions at the end as I turn my gaze to the future. To provide substance for this and other sections of this exploration, I searched on reading, writing, and literacy as well as literacy and new literacies to find relevant scholarship. This resulted in 62 articles for my consideration.

An Initial Look at Literacy

Literacy is not a new term. It, too, has evolved, starting with a traditional definition of literacy that generally stipulated that a literate person was one who could read and write – a learned person. This is in keeping with Langer’s (1991) definition that literacy involves “the ability to think and reason like a person within a particular society” (p. 11). At this same time, Hiebert (1991) offered this characterization: “In the new view, meaning is created through an interaction of reader and text” (p. 1). A more recent definition stated that “literacy has always been a collection of cultural and communicative practices shared among members of particular groups” (National Center for Literacy Education, 2012, np).

Literacy is a concept, concepts have attributes, and we need to know what they are. To summarize across these and other definitions (e.g., Buschman, 2009; Gee, 2007; Roberts, 1995), the distinguishing features of literacy seem to include four attributes: (a) a consideration of writing along with reading, (b) the inclusion of a broader range of communicative systems, (c) a broadening of texts and the reading (and writing) demands linked to them, and (d) a recognition of social practices of schools such as an increase of social interaction across students and unequal opportunities to engage in processes beyond basic skill development (Allington, 1977; Lee, 2007; Levine & Scheiber, 2010; Oakes & Guiton, 1995). While these attributes allow a preliminary and forward step, I agree with Stubbs (2014) that literacy remains a very confused topic.

An Initial Look at Reading

Beyond relying primarily on existing definitions of reading, I go back to my personal experiences that have made reading so central to my professional and personal life. As a beginning middle school English teacher, I quickly learned that my students' struggles with reading made an attention to an English curriculum troublesome. My challenges generally mirrored those unveiled in Collopy's (2015) study of English language arts teachers, especially the concern for their readiness to teach struggling readers and writers. When I sought help with this challenge through a professional development opportunity, I was encouraged to simply circumvent the text. That suggestion might have allowed students access to the content of a selected text, but seemed to further the reading gap between achievers and their less accomplished peers – a trade-off that I was unwilling to accept. This unacceptable recommendation, combined with numerous other concerns, led me on the path to become a reading specialist.

During that program, now decades ago, I wrote an unpublished assignment paper with parts that still resonate with my concerns for students today who don't read well enough. I began the paper by stating that “an awareness exists regarding the unfavorable statistics indicating a wider prevalence of illiteracy among African American students” (p. 1) and toward the end inserted that “It goes without saying that the teacher must be extremely knowledgeable in the reading process, but also should know learning strategies and motivational differences for African American students as separate entities is important. . .” (p. 4). Following many years of teaching, my doctoral program at the University of Illinois allowed me to continue a formal pursuit of my ongoing concerns about such ideas as the gap between one's ability to read narratives and expositions and the complexity introduced by reading tasks that are either well-structured (e.g., word identification) or ill-structured (e.g., comprehension due to varied schemas). My personal research has kept me continually interacting with teachers and in schools looking at issues like tracking (Roe & Radebaugh, 1993), portfolio use (Roe & Vukelich, 1994), comprehension demands in social studies classrooms (Roe, 1994), professional development (Roe, 2004), and differentiation (Roe, 2010).

My lived experiences included many tensions and shifts driven, in part, by the changing views of reading from a bottom-up model, to a top-down, interactive model, to a social interaction model, and finally to the construction-integration model currently seen as the “dominant view” by scholars such as Pearson (2015). In this historically relevant past, the lines that separated these views and their instructional implications were more clearly defined (Hall, 2002; See for examples of these distinctions and empirical work that support these shifts).

A series of beliefs, captured in Roe (1992), positioned me around the tensions of the time – tensions that have not gone away: (1) students learn to read by reading; (2) the opportunity to read is insufficient without an instructionally supportive environment; (3) reading instruction warrants the same authenticity as real reading; and (4) middle-level students are social, value peer relations, and highly prize opportunities to interact with friends. Recently, I added a fifth belief: (5) The unique requirements across types of reading and the role of technology (broadly defined) demand attention. Note that in this latest addition, I stipulate reading, not literacy. .

Comparisons, Implications, and What Ifs

A discussion of literacy and reading leads to a comparison of their attributes. Five areas arise as commonly shared ideas along with the subtle differences that separate them: (a) process, (b) inclusion in discourse communities, (c) the inclusion of systems, (d) setting, and (e) environment (See Table).

As Abigail Adams once stated, “We have too many high sounding words and [far] too few actions that correspond with them” (n.d.). Words, like literacy and reading, are concepts, which come with attributes that suggest implications and actions. Actions coincide with the definitions of literacy and reading one believes. When directly compared (see Table 1), literacy and reading invite a dance across their unique contributions. They suggest comparable, but not completely the same, directions. Literacy ends with a hope for an increased awareness of the complex pieces that contribute to a literate population. Reading

TABLE 1
Concept Comparisons

	Literacy	Reading
a	Joins distinct (but overlapping) processes	Focuses on the process of reading
b	Draws attention to various discourse communities and the processes linked to them	Applies the process of reading to various discourse communities
c	Considers the systems in which processes occur	Considers the systems in which reading occurs
d	Includes a specific setting where processes occur	Occurs in a setting where an interaction with text occurs
e	Promotes a literate environment that contributes to a literate population	Promotes a reading environment that contributes to the achievement of readers and a literate population

brings empirical attention to the complex interplay of pieces that contribute to a reader. Literacy remains a noun or an adjective – literate. It comes with many modifiers. Bloome and colleagues (2013), who suggests that literacy has outworn its usefulness, identifies these examples, some well-known, such as quantitative literacy, scientific literacy, and digital literacy, and others that hold an almost comical connection: twitteracy, palpatory literacy (which refers to massage), and vegetable literacy. Reading on the other hand is a verb, an action, an event, and a stand-alone noun – reader. Some might think that reading has become too focused on skill and will (knowing and doing) and not sufficiently about skill and thrill (knowing and enjoying). Perhaps these previously identified and multidimensional foci embedded in reading need additional attention rather than a term shift. A concern becomes whether sufficient thought has been given to the potential implications of this term change. A number of “what ifs” arise.

Consider texts written by former ALER Laureates. Some have titles that directly and singularly include reading (e.g., Johns & Lenski, 2009; Reutzler & Cooter, 2012; Richardson & Morgan, 2011; Risko & Walker-Dalhouse, 2012). What content and contextual changes occur when the titles shift to literacy (e.g., Ellery, Oczkus, & Rasinski, 2006; Gambrell & Morrow, 2014), address the same content from a reading or literacy perspective (Richardson, 2012), or join the concepts of reading and literacy (Alvermann, Gillis, & Phelps, 2012)? We simply do not know.

If we turn to professional roles, we find that professional roles have also gone through changes in labels. Reading specialists became literacy specialists and then coaches – initially as reading coaches, then on to literacy coaches, instructional coaches, and cognitive coaches. Inherent in these name changes are implications for the responsibilities of these roles (what is gained and what is lost), the knowledge and experiences that accompany them, and the content and selection of professional readings that they suggest. For example, a literacy coach might be more drawn to texts that explore multiple literacies, new literacies and teacher education (e.g. Cervetti, Damico, & Pearson, 2006) and a reading coach might be more drawn to read texts that address how to administer and supervise reading programs (e.g. Wepner, Strickland, & Quatroche 2013) while a cognitive coach may be more interested in reading text about intellectual growth (e.g. Costa and Garmston, 2016). What these shifts in roles and readings mean for students, especially those who struggle to become a literate person and/or a reader, is unknown.

These “what ifs” also extend to preparation programs for future teacher educators and researchers. For example, consider University X and its Language, Literacy, and Technology (LLT) Ph.D. program. A description of this program

states that it addresses issues of teaching, learning and the wide range of literacies as they play out in formal and informal learning contexts. University Y offers a Language, Reading, and Culture program. This Ph.D. degree prepares individuals to pursue research and scholarly careers in literacy studies in conjunction with psychology, linguistics, anthropology, and other disciplines and how they relate to literacy, particularly in educational settings. A student at University X would take these courses: Literacy within the Content Disciplines; Seminar in Language, Literacy, and Culture; Teaching Writing in the Elementary School; Assessment and Instruction for Reading; Improving Comprehension through Literature; Sociocultural Foundations of Language and Literacy; and Psychological Foundations of Language and Literacy. At University Y, students would take the following courses: Conceptual and Theoretical Foundations of Social Justice; Language, Literacy, and Culture; Research in Language Diversity in Education; Vygotsky in Education; Influential Readings in Language, Reading, and Culture; and Social Justice and Higher Education.

These two program descriptions suggest markedly different preparations for their graduates. Questions such as these arise: What knowledge base and general understandings do graduates from these programs acquire? What basic understandings would they be prepared to share with preservice teachers that would contribute to their instructional competence in helping all students read better? These, too, are empirical questions for which longitudinal work to answer them is generally absent.

Broadening Our Understandings

Recently and in part driven by recommendations for teacher education to be more like the medical model, I began reading pieces from the *Journal of the American Medical Association (JAMA)*. Chen and Hay (2015) introduced me to the concept of precision medicine. Precision medicine is an attempt to select an appropriate test to direct medical care from a cost effectiveness orientation, using diagnostic and therapeutic strategies to improve the lives of patients. They found, however, that “many factors are important and each decision is somewhat arbitrary. The final model is interpretable only in the context of those decisions” (p. 1752). Their caution encourages us to soften our acceptance of empirical findings while the stance of Dimitriadis (2012) prods us to remember that “curriculum theory, cultural studies, critical pedagogy, and other schools of thought have provided some important tools for understanding the condition we find ourselves in today. But none seem wholly adequate to the task” (pp. 51-52). Willingham (2015) provides another important reminder: “Much of what makes a teacher great is hard to teach, but some methods of classroom instruction have

been scientifically tested and validated. Teachers who don't know these methods are not stupid; they've been left in the dark" (p. A27). We continue to seek clarity, but find ambiguity.

Explaining complex terms such as literacy and reading is simply difficult, but easy to be misconstrued and easier yet to appear judgmental. I find my intention worth any potential risks, as I intend to draw careful attention to a need for distinctions between literacy and reading that remain complete, respectful, thoughtful, and able to maintain the test of time. Perhaps placing literacy as a superordinate concept would permit the benefits of broadening our understandings without sacrificing the appropriateness of remembering that reading is a process that must be understood and maintained. Within this new superordinate framework, perhaps *literacy* could move beyond the historically limiting practices and understandings from its previous definitions, expanding the attributes in the processes that literacy entails, and (potentially) contribute to a reconceptualization, not a loss, of reading.

As Cervetti, Damico, and Pearson (2006) assert, "there is much work to be done on every front – helping future teachers understand their own multiple literacies, including their awareness of the multiple literacies used regularly and fluently by today's students, finding classrooms and schools in which future teachers can apprentice in enacting a multiple literacies curriculum, and finally, helping them learn to cope with the forces they will encounter in today's highly politicized and highly contentious curriculum struggles" (p. 384). Addressing this work will require looking across differences and seeking mutually agreed upon places for ongoing and forward progress. I turn again to Dimitriadis (2012): "The times when collaborations are most necessary are often the very times when they are the most difficult" (p. 83).

Hope Floats

Everyone has the right to be literate, regardless of their gender, the language they speak, the financial status of their families, or the color of their skin. That places reading and those who can provide guidance, support, and personalized assistance along the way at its core. Thus, should reading be reinvented (reading redux) or should it be eliminated (reading gone)? This is our question to answer. In the words of Wilma Rudolph (n.d.), who accomplished quite a lot during her lifetime as an Olympic athlete, "The triumph can't be had without the struggle."

This is not a time to become self-righteous, belligerent, or stubborn around our personal preferences or world view. We need to engage in sense making, a process where those involved attempt to make sense of the situations in which they find themselves (Weick, 1995). This concept has guided my work with Michelle



Figure 1. Confluence.

Jordan and Robert Kleinsasser for the past four years (Jordan, Kleinsasser, & Roe, 2014a, 2014b, 2014c). Sense making allows us to gain altitude on our wicked issues (and the relationship between reading and literacy is but one), look down on them for intense and collaborative consideration, and move forward in a way that is just right for the moment and the children, their families, and their teachers whom we serve. It is also not the time for a backward look and a retreat to what Pearson (2015) calls a basic skills conspiracy. Nor is it the time to discount the psychological premises that have moved the field forward.

Borrowing another possibility, triggered again by those JAMA articles I read, perhaps we need confluence (See Figure 1) – the flowing together of ideas to develop a uniform approach – capturing the complexity of the relationships within and across literacy and reading while being sufficiently flexible and nimble to allow innovation and progression – and a future of possibilities and hopes.

This is what I wanted for students like Dale Saylor, who tried my soul; Angelina Owens, a young woman who warmed my heart in those first years as an English teacher; for Shane Porter who, in my last year as a reading teacher whispered to me, Ms. Roe, “I can’t read;” for those students whom I recently encountered during a project with a middle school reading teacher whose history of not being a reader halted their ability to find the humor in Jon Scieszka’s (1992), *The Stinky Cheese Man*; for others who could not express their interest and understandings of a text presented to them because they lacked proficiency

in English; and for those who school as we define it just doesn't work. Their needs vacillate between aspects attached to literacy and reading. Our thinking and our work might best be served if we followed that lead – seeking, understanding, and acting upon a range of features seamlessly for the good of the students who most need us to become readers and, as a result, literate.

References

- Adams, A. (n.d.). BrainyQuote.com. Retrieved July 10, 2016, from BrainyQuote.com
Web site: <http://www.brainyquote.com/quotes/quotes/a/abigailada134167.html>
- Allington, R. (1977). If they don't read much, how they ever gonna get good? *Journal of Reading*, 21(1), 57–61. Retrieved from <http://www.jstor.org/stable/40009862>
- Alvermann, D., Gillis, V., & Phelps, S. (2012). *Content area reading and literacy: Succeeding in today's diverse classrooms*. New York City, NY: Pearson.
- Anderson, R., Hiebert, E., Scott, J., & Wilkinson, I. (1985). *Becoming a nation of readers: The report of the Commission on Reading*. Washington, D.C.: National Institute of Education.
- Barone, D. (2015). The fluid nature of literacy: A look at how the definition of literacy has changed, and what it means for today's students. *Literacy Today*, 33(1), 6-7.
- Bloome, D., Averill, J., Hill, H. & Ryi, S. (2013). Ideologies and their consequences in defining literacies. In P. Dunston, S. Fullerton, M. Cole, D. Herro, J. Malloy, P. Wilder & K. Headley (Eds.), *Literacy Research Association 63rd Yearbook*, (pp. 61-77). Altamonte Springs, FL: Literacy Research Association, Inc. Found at: https://secure.literacyresearchassociation.org/pdf/lra_63yearbook_finalproof.pdf
- Cervetti, G., Damico, J., & Pearson, P. (2006). Multiple literacies, new literacies, and teacher education. *Theory into Practice*, 45(4), 378-386.
- Chen, C. & Hay, J. (2015). Premise of precision medicine. *JAMA*, 313(16), 1752.
- Collopy, T. (2015). Readyng ELA teachers for 21st century classrooms. *The Council Chronicle*, 25(1), 8-12.
- Costa, A. & Garmston, R. (2016). *Cognitive coaching*. New York City, NY: Rowman & Littlefield.
- Dimitriadis, G. (2012). *Critical dispositions: Evidence and expertise in education*. New York City, NY: Routledge.
- Ellery, V., Oczkus, L., & Rasinski, T. (2015). *Literacy strong all year long*. Newark, DE: International Literacy Association.
- Freebody, P. (2015). Literacy in research and practice: Examining the changing field of literacy education and the research behind it. *Literacy Today*, 33(2), 10-11.
- Gambrell, L. & Morrow, L. (Eds., 2015). *Best practices in literacy instruction*. New York City, NY: Guilford.
- Hall, K. (2002). *Listening to Stephen read: Multiple perspectives on literacy*. New York City, NY: McGraw Hill.
- Hiebert, E. (1991). Introduction. In E. H. Hiebert (Ed.), *Literacy for a diverse society* (pp. 1-6). New York City, NY: Teachers College Press.

- Johns, J. & Lenski, S. (2009). *Improving reading: Interventions, strategies, and resources*. Dubuque, IA: Kendal Hunt Publishing.
- Jordan, M., Kleinsasser, R., & Roe, M. (2014a). Cautionary tales: Teaching, accountability, and assessment. *The Education Forum*, 78(3), 323-337.
- Jordan, M., Kleinsasser, R., & Roe, M. (2014b). Wicked problems: Inescapable wicked-ity. *Journal of Education for Teaching*, 40(4), 415-430.
- Jordan, M., Kleinsasser, R., & Roe, M. (2014c). Teaching and teacher education: Complexity redux. *Interchange: A Quarterly Review of Education*, 44(3), 275-289.
- Kamil, M., Pearson, P., Moje, E., & Afflerbach, P. (Eds.; 2011). *Handbook of reading research, volume IV*. New York City, NY: Routledge.
- Langer, J. (1991). Literacy and schooling: A sociocognitive perspective. In E. H. Hiebert (Ed.), *Literacy for a diverse society* (pp. 9-27). New York City, NY: Teachers College Press.
- Lee, C. (2007). *Culture, literacy, and Learning: Taking bloom in the midst of the whirlwind*. New York City, NY: Teachers College Press.
- Levine, A. & Scheiber L. (2010). *Unequal fortunes: Snapshots from the South Bronx*. New York City, NY: Teachers College Press.
- National Center for Literacy Education. (2012). Reflections about the meaning of literacy. *Literacy in Learning Exchange*. Retrieved from <http://www.literacylearningexchange.org/defining-literacy>
- National Institute of Child Health, & Human Development (US; 2000). *Report of the national reading panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Washington, D.C.: U.S. Government Printing Office.
- Oakes, J. & Guiton, G. (1995). Matchmaking: The dynamics of high school tracking decisions. *American Educational Research Journal*, 32(1), 3-33.
- Pearson, P. (2015). Theory and practice in reading comprehension: Reflections on a half century of work. Harvard University Jeanne S. Chall Lecture. Retrieved from <https://www.gse.harvard.edu/news/15/10/watch-11th-annual-jeanne-s-chall-lecture>
- Pearson, P., Barr, R., Kamil, M., & Mosenthal, P. (Eds.; 1984). *Handbook of reading research*. New York City, NY: Longman.
- Reutzel, R. & Cooter, R. (2012). *The essentials of teaching children to read*. Upper Saddle River, NJ: Prentice Hall.
- Richardson, J., Morgan, R., & Fleener, C. (2011). *Reading to learn in the content areas*. Independence, KY: Cengage Learning. .
- Risko, V., & Walker-Dalhouse, D. (2012). *Be that teacher: Breaking the cycle for struggling readers*. New York City, NY: Teachers College Press.
- Roe, M. (1992). Strategy instruction: Complexities and possibilities. *Journal of Reading*, 36(3), 190-196.
- Roe, M. (1994). A microethnography of a seventh grade social studies classroom. *Research in Middle Level Education*, 18(1), 21-38.
- Roe, M. (2004). Professional learning catalysts: An examination of one teacher's developing literacy practices. *Reading Research and Instruction*, 44(1), 32-61.

- Roe, M. (2010). The ways teachers do the things they do: Differentiation in middle level literacy classes. *Middle Grades Research Journal*, 5(3), 139-152.
- Roe, M., & Radebaugh, M. (1993). One middle school's elimination of *homogeneous* grouping: A qualitative study. *Research in Middle Level Education*, 17(1), 47-62.
- Roe, M., & Vukelich, C. (1994). Portfolio assessment: What about R for realistic? *Journal of Research in Childhood Education*, 9(1), 5-14.
- Rudolph, W. (n.d.). BrainyQuote.com. Retrieved July 10, 2016, from BrainyQuote.com Web site: <http://www.brainyquote.com/quotes/quotes/w/wilmarudol184355.html>
- Scieszka, J. (1992). *The stinky cheese man*. LaJolla, CA: Simon & Schuster.
- Stubbs, M. (2014). *Language and literacy: The sociolinguistics of reading and writing*. New York City, NY: Routledge.
- Weick, K. (1995). *Sense making in organizations* (Vol. 3). Thousand Oaks, CA: Sage.
- Wepner, S., Strickland, D., & Quatroche, D. (Eds.; 2013). *The administration and supervision of reading programs*. New York City, NY: Teachers College Press.

HIGH SCHOOL TEACHERS' DISCIPLINARY LITERACY KNOWLEDGE

DISSERTATION WINNER

Paula Di Domenico
Northern Illinois University

Abstract

This mixed-methods study examined the disciplinary-literacy knowledge high school English, mathematics, science, and social studies teachers possess and the knowledge and skills on which they rely when planning instruction. Three hundred and eleven high school teachers completed a survey measuring their disciplinary-literacy knowledge; four teachers who completed the survey also participated in a think-aloud protocol of unit design as well as a semi-structured interview. Quantitative data were analyzed via descriptive statistics, factor analysis, a one-way multivariate analysis of variance [MANOVA], and post-hoc tests. Qualitative data were analyzed using three cycles of coding: descriptive codes, axial codes and frequency counts, and assertion development. Data analysis determined that teachers have some disciplinary literacy knowledge, but it does not align with knowledge reported in the literature.

Current educational policies focus on education reform that targets students' literacy achievement to better prepare students for college and career. The Common Core State Standards [CCSS] are one such reform effort adopted in over 40 states (National Governors Association Center for Best Practices [NGA] & Council of Chief State School Officers [CCSSO], 2010). These standards attempt to improve students' literacy and numeracy development in grades K-12. At the secondary level, these standards require a discipline-specific literacy focus in all content areas and call for literacy skills to be taught in a manner attentive to the norms and conventions of the discipline (NGA Center & CCSSO, 2010). In

effect, these standards require discipline-specific literacy instruction, a construct known as disciplinary literacy.

The more complex literacy demands at the high school level necessitate specialized instruction and strategies (Lee & Spratley, 2010; Shanahan & Shanahan, 2008). The goal of a disciplinary literacy approach to instruction is to focus on discipline-specific literacy skills and processes valued in the discipline in an attempt to improve and accelerate students' literacy achievement (Moje, 2008; Shanahan & Shanahan, 2008; 2012). However, it is unclear whether or not high school teachers, who may or may not engage in the same literacy tasks as these experts, rely on the habits of thinking necessary to engage in discipline-specific literacy practices. Thus, an investigation into high school English, math, science, and social studies teachers' self-reported disciplinary literacy knowledge is necessary. Further, it is important to determine if and how this knowledge is integrated into their planning for instruction.

Conceptual Framework

This study is based on the premise that individuals are members of Discourse communities and that members of these communities have both domain knowledge (Alexander & Judy, 1988) and disciplinary-literacy practices (McConachie, 2010; Shanahan & Shanahan, 2012) that they value. Teachers must possess content knowledge as well as knowledge of how that content is produced and consumed in the discipline in order to teach disciplinary literacy processes and practices to students (McConachie, 2010) and to meet the demands of the CCSS.

These practices and processes, referred to as the habits of thinking in the disciplines, have been identified via expert-novice studies wherein literacy processes and practices are the basis for the difference between the experts and the novices (e.g., Bazerman, 1985; Shanahan et al., 2011; Wineburg, 1991). In order for a novice to gain expertise, the novice must have access to both the content and the rhetorical processes involved in adding to the body of knowledge in the field (Geisler, 1moje994). It is important to note that an expert's performance develops through incremental increases in knowledge and skill gained through practice and experience (Ericsson & Charness, 1994). Expertise is not developed through repetition of the same task. In fact, "Individuals do not achieve expert performance by gradually refining and extrapolating the performance they exhibited before starting to practice but instead by restructuring the performance and acquiring the new methods and skills" (Ericsson & Charness, 1994, p. 731). Thus, not only must one have a focused effort on developing this expertise, but one must also engage in the behaviors of experts in order to begin the shift from one who is just

experienced in the field to one who is an expert in the field and knows how to use disciplinary literacy knowledge to promote the learning of content knowledge.

The findings of these expert-novice studies lay the foundation for identifying discipline-specific literacy practices which created the body of knowledge for disciplinary literacy, a type of pedagogical content knowledge involving learning from the texts in various disciplines (Moje, 2007). Because the demands of the CCSS are grounded in disciplinary literacy practices, teachers need to possess disciplinary literacy knowledge in order to meet the demands of the CCSS. Therefore, it is essential to investigate whether or not high school teachers possess the same knowledge as the experts in these studies and whether or not disciplinary literacy is integrated into their plans for instruction. The following research question guided this investigation:

1. What type(s) of domain knowledge do high school teachers in four Discourse communities (English/language arts, mathematics, science, and social studies) possess?

Methods

To investigate high school teachers' disciplinary literacy knowledge and determine how teachers integrate this knowledge into their unit plans for instruction, a convergent, mixed-method study was conducted. The advantage of this mixed-method approach is that it included both an overview of the phenomenon via the survey and a deep dive into teachers' integration of knowledge into practice through think-aloud protocols and semi-structured interviews.

Participants

The population of participants included high school teachers who are certified and are currently teaching Grades 9-12 English, mathematics, science, or social studies in Northern Illinois; 8,627 teachers met these criteria. Twenty-five percent of these teachers taught math, 27% taught English, 27% taught science, and 21% taught social studies (ISBE, 2011). Criterion and random sampling (Creswell, 2012) were used to select survey participants, and nested sampling was used to select the participants for the think-aloud protocols and semi-structured interviews (Mertens, 2010).

Using a random number table (Rand, 2001), 60 public schools were selected to participate in the survey. Participants were 311 teachers who were certified in and were currently teaching one of the above-mentioned subjects; the sample adequately represented the population. A description of the survey participants can be found in Table 1.

TABLE 1
Survey Participants' Demographic Data

Demographic		English	Math	Science	Social Studies
Number		95	66	94	56
Gender	Female	74	43	56	25
	Male	24	23	38	31
Number of years of experience	< 8	29	12	31	16
	9-12	19	15	20	15
	13-18	21	21	23	14
	19+	26	18	20	11
Level of education	Bachelor	17	8	12	6
	Master's	53	36	50	28
	Second master's	19	19	27	16
	Certificate of Advanced Study	4	3	5	2
	Doctorate	2	0	0	4

TABLE 2
Think-Aloud and Semi-structured Interview Participant Overview

Think-Aloud Teacher Participants (Pseudonyms)	Subject	Number of Years of Experience	Grades/Subjects Taught
Christina	Math	12	Freshmen, Juniors; honors algebra, bridge algebra
Max	Science	12	Juniors; Physics, Honors Physics, AP Physics
Claire	Social Studies	7	Juniors; U.S. History
Adam	English	19	Freshmen; English

Through nested sampling (Mertens, 2010), four teachers were asked to participate in a think-aloud of unit development and a semi-structured interview. One teacher from each of the four disciplines (English, mathematics, science, or social studies) who taught in one of the randomly selected schools comprised the sample. An overview of the think-aloud participants can be found in Table 2.

Instrument Development

Quantitative. Data were collected through a survey (42 items; $\alpha = .93$) developed and piloted by the researcher before data collection began (see appendix A). The online survey was organized into five sections including: (1) teachers' view of text and author; (2) teachers' use of strategies; (3) teachers' considerations for planning; (4) teachers' view of students' abilities; and (5) demographic items. The majority of the survey consists of closed-ended Likert-style questions with five options from which participants selected. The 5-point scale was selected as there are minimal gains in reliability when surveys use scales greater 5-points (Smith, et al., 2003).

Qualitative. The think-aloud protocol and semi-structured interview questions (see Appendix B) were also created and piloted by the researcher, the format of which was based on the review of the literature (e.g., Geisler, 1994; Peskin, 1998). Each think-aloud protocol took approximately two hours to complete and was used to facilitate teachers' thinking during planning for an instructional unit. This method was selected because the protocol offers insight into how individuals complete a task (Charters, 2003; Ericsson & Simon, 1980). The semi-structured interviews took place immediately following the think-aloud, which took between 15 and 20 minutes to complete.

Data Analysis

Quantitative. After preliminary data screening was completed to remove surveys that were less than 85% complete. Descriptive statistics, factor analysis, MANOVA, and Scheffe' post hoc tests were utilized to analyze survey data to determine the type of domain knowledge high school teachers reported to possess and whether teachers in varied discipline possessed different disciplinary literacy knowledge, as is suggested by the literature.

Parallel analysis confirmed that six factors should be retained. Because there were only two items in the sixth factor, it was removed from subsequent analysis. The five remaining factors accounted for 60.5% of the variance and

were: (1) teachers' views of students' abilities to engage in habits of thinking, (2) teachers' views of authors and texts, (3) teachers' confidence in teaching habits of thinking, (4) teachers' use of general strategies, and (5) teachers' interactions with texts.

Qualitative. After transcription and member checking, the 176 pages of transcribed audio and additional artifacts collected during the think-aloud protocols were analyzed in three phases. Phase 1 utilized descriptive coding (Wolcott, 1994). In phase 2, these descriptive codes were grouped, reviewed, revised, and used to form axial codes (Charmaz, 2006) that allowed the researcher to begin to interpret the information. Frequency counts (LeCompte & Schensul, 1993) focused on only the data from the think-aloud process and did not include data from the interviews or from breaks in the think-aloud process. In the phase 3, assertions were developed (Saldana, 2009) that provided insight into these four teachers' practices when planning units for instruction.

Findings

Differences Among the Four Disciplines across Five Factors

The results of the MANOVA indicate that there was a statistically significant difference in the ways in which the teachers in the four disciplines responded to the items that loaded into Factors 1 – 4 (see Table 3). In order to determine where

Table 3
Results of MANOVA by Factor

Factor	Result	Effect
Factor 1 (teachers' views of students' abilities to engage in habits of thinking)	$F = (3, 3.9) = 8.59,$ $p < .001$	$\eta_p^2 = .078$ (small effect)
Factor 2 (teachers' views of authors and texts)	$F = (3, 52) = 110.9,$ $p < .001$	$\eta_p^2 = .522$ (large effect)
Factor 3 (teachers' confidence in teaching habits of thinking)	$F = (3, 7.33) = 19.8,$ $p < .001$	$\eta_p^2 = .156$ (medium effect)
Factor 4 (teachers' use of general strategies)	$F (3, 5.27) = 10.665,$ $p < .001$	$\eta_p^2 = .095$ (small effect)
Factor 5 (teachers' interactions with texts)	Results not statistically significant	

differences lie in the factors, post-hoc tests were conducted, as the F ratio in the omnibus test was not sufficient to determine the knowledge teachers reported to possess by discipline (Tabachnick & Fidell, 2000). Scheffe' was selected as it protects against type 1 error but is powerful enough to maintain statistical power (Tabachnick & Fidell, 2000).

For Factor 2 (teachers' views of authors and texts), results indicated that English teachers differed from math teachers ($p < .001$) and science teachers ($p < .001$) but did not differ from social studies teachers. Math teachers differed from English teachers ($p < .001$), science teachers ($p < .001$), and social studies teachers ($p < .001$). The teachers differed in their views of authors and texts, which would be expected, but they did not differ in the ways in which they reported they interact with texts (Factor 5).

The teachers also reported differing confidence in their abilities to teach the habits of thinking (factor 3) as well as their students' abilities to engage in the habits of thinking (factor 1). This data establishes that teachers have some differing views of literacy by discipline. It is also important to determine if those differences are representative of findings from the expert-novice studies.

High School Teachers' Knowledge Compared to the Experts

Results from the survey were compared to the findings reported in the expert-novice studies. Data from survey respondents were corroborated with data from the four teachers' think aloud protocols and semi-structured interviews.

English. Peskin (1998) reports that experts in English relied on allusions to other texts and text structure to aid comprehension. English teachers responding to the survey also reported they were likely to use the structure of text to aid comprehension ($M = 4.4$, $SD = .70$). Nevertheless, when asked during the interview, Adam, the English teacher think-aloud participant, explained that he did not rely on any strategies to unlock meaning when interacting with text.

The CCSS require students to use texts to support claims and build and support arguments which are also a practice of those in the field of English (Wilson, 2011). In this survey, English teachers reported that they were likely to view the text as an argument ($M = 4.3$, $SD = .74$). The English teachers also reported being confident ($M = 4.0$, $SD = .93$) that their students were able to use evidence drawn from text. During this think-aloud, Adam indicated he would ask students to support arguments, but he did not provide any strategies that would support students' work. Instead, he focused on more general strategies to help students unlock meaning. In fact, each time Adam mentioned teaching

the habits of thinking, he did not describe how he would teach these skills to his students; rather, they were mentioned as goals. This indicates that he possesses declarative knowledge regarding habits of thinking such as argumentation, but he did not express whether or not he had procedural or conditional knowledge when planning for disciplinary-literacy instruction.

Mathematics. In the field of mathematics, the experts in the expert-novice studies relied on the interpretation of graphics and texts in a unified manner (Shanahan et al., 2011) and on texts that were a complex set of symbols (Wilson, 2011) but did not contextualize texts (Shanahan et al., 2011) when interacting with the texts in the discipline. Christina, the math teacher in the study who participated in the think-aloud and semi-structured interview, did seem to engage in some of the same habits of thinking as the experts in that she viewed equations and problems as text and did not read texts in a linear fashion. Christina did not mention needing to contextualize text, and the teachers in the survey reported that they were unlikely ($M = 2.7$, $SD = 1.2$) to contextualize text as well, which illustrates alignment with the experts' thinking.

During her think-aloud, Christina mentioned that she would include real-world models in her instruction but did not elaborate on how she would instruct her students to use those real-world models and explained that only her honors students would use these models. Similar to Adam, Christina did not mention how she would teach her students how to engage in the habits of thinking or what strategies she would use to support students. Christina indicated that she possessed declarative knowledge but did not consider procedural or conditional knowledge when planning disciplinary-literacy instruction for her students.

Science. According to Charney (1993), scientists engage in specific habits of thinking as they interact with text. For example, they preview the text so that they understand the concepts presented which allows them to view the text as an argument. This attempt to understand what the text is saying and not become lost in the rhetoric is also why scientists read text in a nonlinear fashion (Bazerman, 1985). Determining the information presented in the text is another main habit of thinking in which scientists engage when reading texts, yet teachers in the survey reported being less confident that their students could read texts to determine information presented ($M = 3.3$, $SD = .92$). The science teachers also reported that they did preview the text prior to reading ($M = 3.9$, $SD = 1.1$) but were not likely to view the text as an argument ($M = 3.0$, $SD = 1.0$). In this way, survey respondents did not report engaging the same habits of thinking as did the experts in the literature.

During the semi-structured interview, Max, the science teacher in the study, stated that there are “no new frontiers” in high school physics, so he did not view the texts with which his students engaged as arguments. He did state that the ways in which people read about science was impacted by the field of science studied. He mentioned that there may be more arguments in biology but that the majority of concepts high school students encountered in physics were more factual in nature. Max, a physicist, did not view texts as arguments. Thus, it was unlikely that Max would teach his students to engage with texts in this manner.

Social Studies. In the expert-novice studies in the field of social studies, novices viewed text as information gathering/presenting instead of viewing texts as one person's point of view and argument, as the experts did (Rouet et al., 1997; Wineburg, 1991). Experts also paid attention to the source and context of the text and used this information to construct meaning (Rouet et al., 1997; Wineburg, 1991) and considered the author's perspective when interpreting text (Shanahan et al., 2011).

Social studies teachers responding to the survey reported they were likely to view the text as an argument an author was making ($M = 4.1$, $SD = .89$). Also, the social studies teachers considered the viewpoints of the authors when interacting with texts ($M = 4.5$, $SD = 8.6$) as well as the context of the text ($M = 4.6$, $SD = .60$). The social studies teachers reported being likely to consider an author's point-of-view, viewing the text as an argument the author was making, and considering the context of the text when interpreting the text; thus, they are aligned in sharing habits of thinking of the experts. Interestingly, these teachers also viewed the texts as sources of factual information ($M = 4.6$, $SD = .60$), which was a sentiment that none of the experts reported. Claire, the social studies teacher who participated in the think-aloud and semi-structured interview also viewed the text as factual. In fact, she based her lessons and choice of supplemental text on the topics as presented in the text.

Discussion and Implications

Teachers' reported knowledge did not consistently align with the experts' reported knowledge. Further, this knowledge was not represented in their plans for instruction. Teachers in the study possessed declarative knowledge regarding the habits of thinking but did not report any conditional or procedural knowledge (Alexander & Judy, 1988) required to transfer this knowledge to students. In effect, these teachers are experienced non-experts (Bereiter & Scardamalia, 1993) in their disciplines, though they may in fact be excellent teachers. Thus, it is clear that teachers require professional development in a manner that allows

them to engage with the texts of their disciplines and contribute to the body of knowledge in their disciplines so they will be prepared to apprentice students to the disciplines and meet the demands of the CCSS.

Supporting teachers' development of disciplinary literacies would support their integration into instruction and help teachers meet the demands of the CCSS. This is important as disciplinary literacy instruction holds promise as an avenue to impact adolescent students' literacy achievement. This discipline-specific, targeted professional development is essential as all students require the opportunity to be apprenticed to the disciplines in order to successfully interact with the texts of the disciplines. By examining the type of knowledge teachers report to possess and the knowledge they use when planning for instruction, one can determine how to support teachers' professional development and ensure they are prepared to enact discipline-specific literacy instruction for all students.

Limitations

Several limitations must be considered when interpreting the results of this study. First, one limitation of the think-aloud is that it represents only verbalized cognition and not anything that the teachers do not report. Additionally, the think-aloud may slow teachers' thought processes and not completely represent a teacher's planning process (Ericsson & Simon, 1980). In an attempt to mediate this limitation, probes were used with teachers if they did not include four common elements of unit construction. These probes were designed to prompt teachers' thinking about text selection, lesson objectives, assessment, and instructional delivery. Also, teachers were interviewed after the think-aloud and were given the opportunity to explain or alter their unit plan. Finally, teachers were asked to review transcripts and determine whether or not the transcripts represented their planning process accurately.

The survey data also present a limitation in that they include only self-reported knowledge, and there is no connection to what the teachers are actually doing when teaching and interacting with the texts in their discipline. The think-aloud protocol and semi-structured interview data attempted to augment the limitations of survey responses with regard to the knowledge teachers possess that is present in instructional planning, and the semi-structured interview questions attempted to corroborate items in the survey by allowing the four teachers to report and expand on what they were doing when interacting with texts in their disciplines. Nevertheless, teachers' own practices with the texts of their disciplines were not observed.

Finally, the sample size for the survey was robust and adequately represented the population of teachers from the northern Illinois region, but the

sample size for the think-aloud protocols and the semi-structured interviews was limited to four participants, and this sample size is limiting. Future research could investigate teachers' knowledge using a broader sample.

Conclusion

Disciplinary literacy holds promise as an avenue to impact adolescent students' literacy performance. By teaching students the habits of thinking in the respective disciplines, students learn to apprentice the discipline in a manner that may unlock understanding in such a way that it might create passion for a subject. This approach requires teachers to focus on the language used in texts, the texts themselves, and authorship when presenting texts from their discipline to students. Engaging in the habits of thinking in a discipline requires that teachers have the time and support necessary to engage deeply with the texts of their respective disciplines so they can create these opportunities for their students.

References

- Alexander, P. & Judy, J. (1988). The interaction of domain-specific and strategic knowledge in academic performance. *Review of Educational Research*, 58(4), 375-404.
- Bazerman, C. (1985). Physicists reading physics: Schema-laden purposes and purpose laden schema. *Written Communication*, 2(1), 3-23.
- Bereiter, C. & Scardamalia, M. (1993). *Surpassing ourselves: An inquiry into the nature and implications of expertise*. Chicago, ILL: Open Court.
- Charmaz, K. (2006). *Construction grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: SAGE.
- Charney, D. (1993). A study in rhetorical reading: How evolutionists read "The Spaniards of San Marco." In J. Selzer (Ed.), *Understanding scientific prose* (pp. 203-231). Madison, WI: University of Wisconsin Press.
- Charters, E. (2003). The use of think-aloud methods in qualitative research: An introduction to think-aloud methods. *Brock Education*, 12(2), 68-82.
- Creswell, J. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). New York City, NY: Pearson.
- Ericsson, K. & Charness, N. (1994). Expert performance: Its structure and acquisition. *American Psychologist*, 49(8), 725-747.
- Ericsson, K. & Simon, H. (1980). Verbal reports as data. *Psychological Review*, 87(3), 215-251.
- Geisler, C. (1994). *Academic literacy and the nature of expertise: Reading, writing, and knowing in academic philosophy*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Illinois State Board of Education [ISBE]. (2011). Data analysis and accountability. Retrieved October 2013 from <http://www.isbe.state.il.us/research/Default.htm>

- LeCompte, M. & Schensul, J. (1993). *Ethnography and qualitative design in educational research* (2nd ed.). San Diego, CA: Academic Press.
- Lee, C. & Spratley, A. (2010). *Reading in the disciplines: The challenges of adolescent literacy*. New York City, NY: Carnegie Corporation of New York.
- McConachie, S. (2010). Disciplinary literacy: A principle based framework. In S. McConachie & A. Petrosky (Eds.), *Content matters* (pp. 15-31). San Francisco, CA: Jossey-Bass.
- Mertens, D. (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (3rd ed.). Los Angeles, CA: Sage.
- Moje, E. (2007). Developing socially just subject-matter instruction: A review of the literature on disciplinary literacy teaching. *Review of Research in Education*, 31(1), 1-44.
- Moje, E. (2008). Foregrounding the disciplines in high school literacy teaching and learning: A call for change. *Journal of Adolescent and Adult Literacy*, 52(2), 96-107.
- National Governors Association Center for Best Practices [NGA Center] & Council of Chief State School Officers [CCSSO]. (2010). *Common core state standards for English language arts and literacy in history/social studies, science, and technical subjects*. Washington, DC: Authors.
- Peskin, J. (1998). Constructing meaning when reading poetry: An expert-novice study. *Cognition and Instruction*, 16(3), 235-263.
- Rand Corporation. (2001). *A million random digits with 100,000 normal deviates* (2nd ed.). Retrieved on August 17, 2013, from http://www.rand.org/pubs/monograph_reports/MR1418.html
- Rouet, J., Favart, M., Britt, M., & Perfetti, C. (1997). Studying and using multiple documents in history: Effects of discipline expertise. *Cognition and Instruction*, 15(1), 85-106.
- Saldana, J. (2009). *The coding manual for qualitative researchers*. Los Angeles, CA: SAGE.
- Shanahan, T. & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, 78(1), 40-59.
- Shanahan, T., & Shanahan, C. (2012). What is disciplinary literacy and why does it matter? *Topics in Language Disorders*, 32(1), 7-18.
- Shanahan, C., Shanahan, T., & Misischia, C. (2011). Analysis of expert readers in three disciplines: History, mathematics, and chemistry. *Journal of Literacy Research*, 43(4), 393-429.
- Smith, E., Wakely, M., de Kruit, R., & Swartz, C. (2003). Optimizing rating scales for self-efficacy (and other) research. *Educational and Psychological Measurement*, 63(3), 369-391.
- Tabachnik, B. G., & Fidell, L. S. (2000). *Using multivariate statistics* (4th ed.). Boston: Allyn & Bacon.
- Wilson, A. (2011). A social semiotics framework for conceptualizing content area literacies. *Journal of Adolescent and Adult Literacy*, 54(6), 435-444.
- Wineburg, S. (1991). On the reading of historical texts: Notes on the breach between school and academy. *American Education Research Journal*, 28(3), 495-519.
- Wolcott, H. (1994). *Transforming qualitative data: Description, analysis, and interpretation*. Thousand Oaks, CA: SAGE.

APPENDIX A

Online Survey Measuring Teachers' Disciplinary-Literacy Knowledge

Construct	Items	Type
Teachers' View of Text/Author	<p>Directions: As you answer the following questions:</p> <ul style="list-style-type: none"><li>• think about how you use text to learn in your discipline (science, math, social studies, or English/language arts).<li>• when you think of the term text, consider a broad definition. That is, text is anything that brings a message to someone. For example, text could be a movie, an illustration, an equation, a formula, a poem, a song, an article, or a lecture.	Likert
	<p>[Very Likely, Likely, Undecided, Unlikely, Very Unlikely]</p>	
	<ol style="list-style-type: none"><li>1. When you are interacting with texts in your discipline, how likely are you to consider the author to determine whether or not the source is credible?<li>2. When you are interacting with texts in your discipline, how likely are you to consider the events taking place around the time the text was written?	

3. When you are interacting with texts in your discipline, how likely are you to read more than one text when reading to learn about a topic?
4. When you are interacting with texts in your discipline, how likely are you to read more than one type of text (videos, primary sources, images, models) to create an understanding of a topic?
5. When you are interacting with texts in your discipline with the purpose of learning new information, how likely are you to view texts as a source of factual information?
6. When you are interacting with texts in your discipline, how likely are you to view the text as an authority on the subject?
7. When you are interacting with texts in your discipline, how likely are you to view the text as an argument the author is creating?
8. When you are interacting with texts in your discipline, how likely are you to consider the author's point-of-view when reading the text?
9. When you are interacting with texts in your discipline, how likely are you to consider the author's purpose for writing the text as you read the text?

Teachers' Use of
Strategies to Make
Sense of Text

Directions: As you answer the following questions:

- think about how you use text to learn in your discipline (science, math, social studies, or English/language arts).

- when you think of the term text, consider a broad definition. That is, text is anything that brings a message to someone. For example, text could be a movie, an illustration, an equation, a formula, a poem, a song, an article, or a lecture.

[Very Likely, Likely, Undecided, Unlikely, Very Unlikely]

1. When you are interacting with texts in your discipline, how likely are you to utilize prior knowledge to make meaning from the text?
2. When you are interacting with texts in your discipline, how likely are you to set a purpose to read the text?
3. When you are interacting with texts in your discipline, how likely are you to preview the text prior to reading the text?
4. When you are interacting with texts in your discipline, how likely are you to use the structure of the text to aid your comprehension of text?
5. When you are interacting with texts in your discipline, how likely are you to interpret graphics and images?
6. When you are interacting with texts in your discipline, how likely are you to investigate patterns present in the materials?
7. When you are interacting with texts in your discipline, how likely are you to make generalizations about the topics/concepts present in the text?

8. When you are interacting with texts in your discipline, how likely are you to read texts in order from start to finish?
9. When you are interacting with texts in your discipline, how likely are you to focus on the accuracy of the information present in the text?
10. When you are interacting with texts in your discipline, how likely are you to focus on the precise terminology present in the text?
11. When you are interacting with texts in your discipline, how likely are you to focus on how precisely the information is presented?
12. When you are interacting with texts in your discipline, how likely are you to create a drawing to aid comprehension?
13. When you are interacting with texts in your discipline, how likely are you to write as you read to aid comprehension?
14. When you are interacting with texts in your discipline, how likely are you to make predictions about the topic as you are reading?

Teachers' Considerations for Planning for Instruction

Directions: As you are answering the following questions, consider yourself in your role as a teacher. Rank your confidence regarding the following statements.

Likert

[Very Confident, Confident, Undecided, Unconfident, Very Unconfident]

1. Rank your confidence in teaching students how to use the structure of the text to aid comprehension.

2. Rank your confidence in teaching students how to construct arguments about a topic.
3. Rank your confidence in teaching students how to critique the arguments of others.
4. Rank your confidence in teaching students how to solve problems in using real-world scenarios.
5. Rank your confidence in teaching students how to use more than one text to verify an idea presented in a text.
6. Rank your confidence in teaching students how to use more than one type of text when building an understanding of a topic.
7. Rank your confidence in selecting texts with diverse formats such as graphs, images, and visuals for students to read and interpret independently.
8. Rank your confidence in being able to provide students with sets of texts they can use to independently answer a question.

Teachers' Views of
Students' Abilities
to Engage in
Habits of
Thinking

Directions: Consider your students as you answer the following questions.

[Very Confident, Confident, Undecided, Unconfident, Very Unconfident]

Likert

1. Rank your confidence in your students' ability to identify a pattern present in a problem.
2. Rank your confidence in your students' ability to use terms in your discipline with precision.

3. Rank your confidence in your students' ability to use appropriate, discipline-specific terminology when discussing a topic.
4. Rank your confidence in your students' ability to draw conclusions from text independently.
5. Rank your confidence in your students' ability to cite evidence to support an idea.
6. Rank your confidence in your students' ability to use evidence drawn from the text.
7. Rank your confidence in your students' ability to analyze the development of an event or character over time in the text.
8. Rank your confidence in your students' ability to compare approaches taken by two or more authors on a text.
9. Rank your confidence in your students' ability to analyze how point-of-view or purpose shapes a text.
10. Rank your confidence in your students' ability to analyze how reading for a specific purpose shapes a text.
11. Rank your confidence in your students' ability to follow a multistep procedure.

Demographics

Directions: Please answer the following questions.

Mixed:
Closed and
open-ended

1. Which of the follow subject areas are you certified to teach? (English/ language arts, mathematics, social studies, science).

-
2. What is the highest level of education you have completed? (bachelor, master's, second master's, certificate of advanced study, doctorate)
 3. Which of the following subject areas do you currently teach? (English/language arts, mathematics, social studies, science).
 4. How many years have you been teaching in that subject area?
 5. How many professional development sessions have you participated in on the topic of disciplinary-literacy instruction? (none, one or two, three or four, five or six, more than seven)
 6. How many courses have you had on the topic of disciplinary literacy? (none, one or two, three or four, five or six, more than seven)
 7. Which best describes the level of student you primarily teach? (honors, advanced placement, core classes, remedial classes)
 8. Male or female

APPENDIX B

Semi-structured Interview Questions

If the participant has completed the unit plan, the researcher will skip to Question 2. If the participant has not completed the unit plan within the two-hour time frame, the first question will be:

1. I realize that we ran out of time. Walk me through how you would complete planning this unit.
2. Is this typical of the way you usually plan a unit? If so, how? If not, what was different?
3. How satisfied are you with the plans? Explain.
 - a. Looking back, is there anything you would change, omit, or add?
4. Think of the lessons you planning in this unit. Remind me of which texts you will use. How are these texts selected?
5. Now, thinking of lesson planning in general, do you regularly incorporate literacy instruction into your courses?
 - a. If so, how? If not, why not?
6. Also thinking about your teaching in general, what is your biggest challenge in helping students interact with text?
7. When you are thinking of yourself as one who interacts with text in your discipline, not your discipline of teaching but your discipline of [insert teacher's discipline], how would you describe your own interactions with text in your discipline?
 - a. When you think of the term text, consider a broad definition. Text is anything that brings a message to someone (a movie, an illustration, an equation, a formula, a poem, a song, an article, or a lecture.
(Possible following-up/prompting questions.)

- i. How likely are you to rely on the text's structure?
 - ii. How likely are you to consider the author and credibility of the source?
 - iii. How likely are you to rely on more than one text when studying a topic?
 - iv. How likely are you to view the source as an argument?
 - v. How likely are you to consider the author's purpose for writing the text?
8. When you are interacting with texts in your discipline, do you find yourself relying on strategies? If so, describe the strategies you might use when interacting with texts in your discipline.
(Possible follow up questions.)
- a. How likely are you to set a purpose to read the text?
 - b. How likely are you to investigate patterns present in the materials?
 - c. How likely are you to utilize prior knowledge to make meaning from the text?
 - d. How likely are you to preview the text prior to reading?
 - e. How likely are you to read texts sequentially?
 - f. How likely are you to create a drawing or take notes to aid comprehension?
9. Now I'd like you to think of yourself in your role as a teacher. Describe how you feel about your own ability to help students read and write in your discipline.
(Possible follow up)
- a. How confident are you in teaching students how to solve problems in real world scenarios?
 - b. How confident are you in teaching students how to critique the reasoning of others?
 - c. How confident are you in selecting appropriate texts for your students?
10. Describe how you feel about your students' ability to comprehend the texts in your discipline.
(Possible follow-up)
- a. How confident are you in your students' ability to use appropriate terminology when discussing a topic?
 - b. How confident are you that students can use evidence to support ideas using details from the text?
 - c. How confident are you in students' ability to compare two approaches to text?
 - d. How confident are you in your students' ability to follow a multistep procedure?

Now I'd like to ask you some information about yourself:

11. What is the highest level of education you have completed?
12. In which areas are you certified to teach?
13. Which classes do you currently teach? For how long have you been teaching these classes?
14. In general, which level of courses do you teach most often?
15. How many courses in disciplinary literacy have you taken?
16. Describe how many hours, if any, of professional development you've participated in related to the topic of disciplinary literacy.

RESEARCH TO PRACTICE: WEB LITERACY STRATEGIES FOR TEACHERS AND STUDENTS

Jodi Pilgrim

University of Mary Hardin-Baylor

Elda Martinez

University of the Incarnate Word

Abstract

In her presidential address, J. Helen Perkins (2015) indicated that Association of Literacy Educators and Researchers (ALER) members impact education by conducting research which informs instruction. A 2014 study with focus group participants provided insight into teachers' knowledge and application of Web literacy skills in the classroom (Pilgrim & Martinez, 2014). Web literacy skills are required for online reading and Internet navigation. Focus group teachers in the study implemented Web literacy activities in their classrooms and shared their experiences. One outcome of the study was the creation of instructional tools for teachers and students engaged in web literacy practices. In an effort to inform instruction of Web literacy skills, this paper defines Web literacy, reviews the research conducted, and includes materials developed from research with K-12 teachers.

As new technologies emerge and educators make decisions regarding technology integration, “online reading and learning should be our focus” (Leu, Forzani, Timbrell, & Maykel, 2015, p. 139). Due to increased connectivity and the abundance of information throughout the world, students must be exposed to ways to navigate and discern online information. According to the U.S. Department of Education’s National Technology Plan (2010), today’s students need hands-on, collaborative learning experiences inside and outside of classrooms, using common technology and reliable Internet access. For the

development of digital citizenship, the U.S. Office of Educational Technology refers educators to the International Society for Technology in Education's (ISTE) standards. "Today's students need to be able to use technology to analyze, learn, and explore. Digital age skills are critical for preparing students to work, live, and contribute to the social and civic fabric of their communities" (ISTE, 2012, para. 2). Classroom research projects offer exposure to online information and opportunities for students to apply Web literacy skills to acquire new knowledge (Pilgrim & Martinez, 2015). For instance, a teacher may require students to research a historical figure in order to obtain biographical information. While traditional research tools such as libraries and books may be utilized, online research skills may be applied as well. Yet, limited resources exist to support teachers as they guide students during online research. The changing nature of today's technology requires educators to consider the evolving role of the Internet in the classroom. With this in mind, technology integration in the authors' 2014 study included teacher-designed Web literacy activities focused on student-centered learning within an online, technology-based environment.

According to "What's Hot for 2016" (Cassidy, Grote-Garcia & Ortlieb, 2015), presented at the 2015 ALER conference, the topic *digital literacy/new literacy/media literacy* was identified as *very hot* by literacy professionals. Web literacy is a term often used interchangeably with digital/new/media literacy. We intentionally used the term *Web literacy* in our work because it emphasizes the skills needed when conducting research from web-based sources and it reflects the work of Alan November, author of *Web Literacy for Educators* and a recognized expert in this field, who utilizes this term in his training and resources. The term *Web literacy* was addressed in the April 2015 issue of *The Reading Teacher* as Bridget Dalton described the Mozilla Firefox interactive Web literacy website, which addresses ways Internet users engage with online information. According to Dalton, "Web literacy is huge. It's everything we do on the Web" (Dalton, 2015, p. 605). In addition, the recent issue of *The Reading Teacher*, "21st-Century Literacy Practices and Engaging Instruction," devoted considerable attention to the role of the Internet (Web literacy skills) in student learning. In the same themed issue, Leu, et al. (2015) referred to the skills required for engaging with online text as "online reading." Regardless of the term applied to the skills, the topic demands immediate attention as practitioners must teach the use of the Internet in an effective manner. The purpose of this article is to define Web literacy and to review research that led to instructional materials shared at the 2015 ALER conference.

Background

Web Literacy

The Internet has become the largest and most available repository of information. Dalton maintains, “To be a literacy teacher today means to be a teacher of Web Literacy.” (2015, p. 604). We, however, assert that to be a teacher of *any* subject means to be a teacher of Web literacy. Web literacy, required for reading, writing, and participating in an online environment (November, 2008; Mozilla, 2014), is important because the Internet will “increase, not decrease, the central role teachers play in orchestrating learning experiences for students as literacy instruction converges with Internet technologies” (Leu, Kinzer, Coiro, Castek, & Henry, 2013, p. 1173). Exposure to online information enables students to become proficient in the literacies of their futures (International Reading Association, 2009; Leu, et al., 2015).

The Internet has become the largest and most available repository of information (Leu, et al., 2015). Web literacy skills enable students to be productive consumers of this information, as they apply knowledge and skills to locate, evaluate, synthesize, organize, and communicate information found online (November, 2008; Leu, et al. 2015). The application of Web literacy skills provides opportunities for students to research content with attention to the quality and evaluation of such research, rather than simply searching content. For example, students who demonstrate Web literacy proficiency have acquired knowledge regarding the quality and purpose of search engines for research as well as strategies to narrow searches using Boolean terms (key words with operators to increase the specificity of search results), quotation marks, or search engines (November, 2008). Once information is located, students must evaluate a website and its content for validity and reliability. The student may read the URL to determine information about the source, and the student may critically examine online content for reliable information. This process of validation may also include determining the author of the website or examining forward and backward links on the website to view other pages associated with the website (November, 2008). Once valid websites have been located, students must synthesize information. Synthesizing the information requires the student to determine important details, to summarize information (possibly presented in multimedia formats), and to reword content (November, 2008). Such skills are necessary in order to convey what has been learned about a topic, while at the same time avoiding plagiarism. Organizing information entails using online tools to organize vast amounts of online information. Finally, collaboration and communication require students to connect with others using online networks or Web 2.0 tools and to present a final product (November, 2008). Acquired

content may be represented and communicated through a variety of digital and print formats, including video, multi-media presentations, written reports, etc. As students conduct searches for information, teachers relinquish sole control of content delivery and become facilitators of student research. The success of the research process and product may depend on the students' Web literacy skills.

2014 Study

As researchers, we collaborated with a network of private schools in South Texas during the 2014 academic year to study elementary and secondary teachers' perceptions about Web literacy and how perceptions affected technology integration decisions. Qualitative data were collected from inservice teachers participating in focus group sessions. Participants attended a November Learning workshop prior to focus group sessions. The workshop provided professional development related to Web literacy skills used in the classroom. The first focus group session, consisting of eight teachers, took place in February 2014. During this session, participants discussed Web literacy as it related to their personal and classroom experiences. At the end of session one, participants were tasked with applying knowledge gained from the Web literacy training to their classroom instruction. After implementing a Web literacy task in the classroom, teachers returned for a second focus group in May 2014. This session, consisting of five teachers, provided each participant an opportunity to share with others and to discuss their experiences implementing the Web literacy activity.

Both focus group sessions were digitally recorded, transcribed, and analyzed for themes. The classroom products developed by the teachers were also examined as qualitative data. Therefore, data analysis initially utilized deductive coding in order to incorporate skills/research associated with locating, evaluating, synthesizing, organizing, and communicating information. Using NVivo computer software, qualitative data were analyzed and categorized using a coding system where themes were developed to reflect teachers' perceptions of Web literacy and technology integration.

All participants in the study utilized Web literacy skills in which students used the Internet to locate and examine content related to course objectives. Students engaged in online searches in order to find content related to the assigned task, and teachers promoted strategies to help students effectively locate, evaluate, and communicate information. Most teachers developed strategies to scaffold their students during the research process. For example, a Latin teacher provided a research guide which directed students to ask evaluative questions about the websites they used. Guiding questions included: *What does the URL of the site tell you? Who is the author of the site? Why can you trust him/her? Who*

are their references? In general, participants scaffolded student performance on research assignments by supplementing the assignment with strategies designed to support Web literacy skills. Most participants had implemented classroom research assignments prior to the focus group sessions. However, findings indicated that even though teachers recognized their students demonstrated weak digital literacy skills, they lacked knowledge about how to adapt and improve instruction related to online navigation. Complete findings from this study may be found in December 2015 issue of the *Journal of Literacy and Technology* (Pilgrim & Martinez, 2015).

Using knowledge gained from work with focus group participants, we identified the need for instructional tools teachers could use to incorporate Web literacy strategies in the elementary and secondary classroom. In this chapter, we share the SEARCH acronym, which serves as a tool for teaching students how to effectively search the Internet. In addition, we propose the use of the Web Literacy Checklist as a tool for guiding students through the search process.

Web Literacy Instructional Strategies

“The rules of research have changed with society’s move from paper to digital information” (November, 2008, p. 6). In order to prepare students for this paradigm shift, classroom practices should involve research in which students use the Internet to locate information about an assigned topic with expectations of critical analysis and synthesis. An authentic way to teach Web literacy is to engage students in inquiry-based activities such as online research. However, engaging students in research without providing instruction about how to use the Internet correctly may result in inaccurate searches, the use of inadequate websites, or in misuse of information (plagiarism). The lack of such instruction may be due to various factors. Often, teachers assume students’ possess intuitive abilities to use technology because they have abundant technologies available to interact and communicate in their daily lives. It is important to note the use of technology tools is quite distinct from the knowledge of how to use technology tools for literacy development. Additionally, teaching literacy skills with print materials differs from teaching literacy with Web resources. While some traditional literacy skills apply, there are differences to consider (Leu, et al., 2015). The authorship of print materials provides review of content validity. The “publishing” of digital media is open to anyone, which requires a critical analysis for validation. Formatting of print versus digital resources adds to the differences. Digital media allows for layers of information with hyperlinks, multi-media facets, and interactive resources. Multi-modal information varies significantly from traditional print format, which is linear in design and limited to text and visual representations.

It is necessary to also consider teacher awareness of the need to explicitly teach Web literacy skills. Are they aware of the similarities and differences of literacy proficiency for print and Web-based resources? Finally, it is essential that teachers engage in self-examination of their own research skills and consider if and how those skills have evolved for the differences in modes of delivery. It becomes apparent that students benefit from explicit instruction related to Web literacy skills, which improve online reading (November, 2008). To support this needed instruction, we present two Web literacy instructional strategies—the SEARCH acronym and the Web Literacy Checklist.

SEARCH Strategy

The SEARCH acronym is one way to provide explicit Web literacy instruction in the elementary grades. When students “reSEARCH,” they must apply their knowledge of the Internet. Each letter in the SEARCH acronym provides direction related to effective Internet searches (Figure 1).

The S in SEARCH stands for “Select Keywords.” Regardless of the search engine students use (Google, Bing, DuckDuckGo, Yahoo, Dogpile), applying appropriate keywords produces successful search results. Keywords should reflect what students want to know about a topic. A student assigned a research paper on the Alamo might try a keyword search such as *History of the Alamo* instead of *Alamo*. Although a variety of keyword combinations may provide effective search results, discussing key words with students helps them become more intentional in their searches.

The E in SEARCH stands for “Evaluate Hits and Content.” This part of the search entails two different tasks. An Internet search produces an overwhelming number of results for students to examine. For example, a search for *Web literacy* results in about 17 million hits. Therefore, the first task involves the evaluation of the types of websites a search generated. Students will not have

S	Select Keywords
E	Evaluate Hits and Content
A	Add Quotation Marks or Boolean Terms
R	Refine Results
C	Check the URL
H	Hunt for Key Information

Figure 1. The SEARCH Steps.

time to visit each website and often default to the first sites listed. This tendency is not based on quality but rather convenience. Effective researchers skim the results to find promising websites, which will likely provide quality information. They might avoid commercial websites and seek out websites from respected organizations. For example, a student searching for information about the *ocean* may decide to select the link associated with the National Ocean Service or a National Geographic link, as both of these organizations would be deemed reliable. Content on websites must be evaluated as well. Students must evaluate the content of selected websites for accuracy. Evaluation may involve determining the author or publisher of a website. Students may locate a website's publisher information by using the Whois? Database (November, 2008). If a website's content seems questionable and students want to know who owns the site or has published the material, they can go to www.easywhois.com.

The A in Search stands for "Add Quotation Marks or Boolean Terms." Because initial searches may result in over a million hits, teaching students tools enables them to significantly narrow searches. For example, students may use quotation marks with keyword phrases to ensure the words are searched in the order in which they are entered. A search for "blue whale" should include quotation marks around the phrase to produce desired results about blue whales, instead of results which include all references to the words "blue" and "whale." An example of a simple Boolean term students may apply is the plus or minus sign. Students may use the plus sign to join words or phrases or to require common words (often ignored in searches) to be located. For example, when searching about diabetes, the plus sign may be used to add "type one," or the minus sign could be used to omit type 2 diabetes from the search (Ex: "juvenile diabetes" – type 2). Other common Boolean terms include the use of words like OR (broadens a search) or AND (narrows a search).

The R in SEARCH stands for "Refine Results." A search can be narrowed further by using tools such as the Google toolbar, which enables Internet users to conduct advanced searches using criteria such as language, readability, file type, usage rights, or other settings. For example, a Google search for *Web literacy* yields approximately 17,000,000 results. By conducting an advanced search, the results may be refined by requiring the words *Web literacy* in the title. A search of this nature yields 16,000 results, which may be more manageable and specific than the initial inquiry.

The C in SEARCH stands for "Check the URL" for clues about a website's content. November Learning's book, *Web Literacy for Educators*, presents many tips relating to URLs. Internet users must understand the domain and extension (.edu, .org, .com), find the author, and utilize many other clues URLs

may provide. For example, the tilde (~) is a clue that the website is a personal page which could be authored by any person without review or validation of content.

Finally, the H in SEARCH stands for “Hunt for Key Information.” Wading through online text to find target information can be tedious. As students “hunt,” teach them to skim text for important information, examine multiple sources, or try alternative key words when necessary. Students are basically searching for the main idea of the text, which requires them to successfully navigate through hyperlinks and other Internet features. While hunting for key information, bookmarking the information provides a way for students to efficiently revisit information at a later date. Bookmarking tools provide many options for students, including a place to store located information, ways to take and organize notes about websites, and ways to share digital folders and post notes during online collaboration.

Through our discussion with teachers, we found that many teachers do not know about tools mentioned in the SEARCH acronym, so we also developed a module for teachers to reference in order to share search tips with their students. The module is available at the following link: <https://drive.google.com/file/d/0B7fS-E7jzjHCLUNRb05Zek0yM1k/view?usp=sharing>

Web Literacy Checklist

Following our 2014 study, we developed a Web literacy checklist to guide teachers and students through the process of conducting web-based searches. A checklist is generally a list of items required, things to be done, or points to be considered. The Web Literacy Checklist is not intended to be an assignment, but rather can serve as a reference for students as they conduct effective Internet searches. The checklist has been examined by professionals who teach education technology courses, the checklist was used by 60 pre-service teachers who provided feedback regarding the usability of the instrument, and was used with fifth graders to determine ways to improve its application with younger students. The checklist presented here has been revised over the past year so that we may share it as an effective way to guide students new to the search process.

The checklist is a four part document—it can be used in part or in whole, depending on the goals of the teacher. Part one of the checklist is *locate information*, part two is *evaluate information*, part three is *synthesize information*, and part four is *organize and communicate information* (Figure 2). The checklist should be modeled by the teacher so that students understand the rationale behind each of the four sections.

Locate Information [The Search]

Check each item as completed	Explain	
<input type="checkbox"/> What search engine did you use (Google, Kidtopia. . .)? What browser did you use? <input type="checkbox"/> What key terms (or phrase) did you use for your search?		
<input type="checkbox"/> Look at the number of hits generated. <input type="checkbox"/> Narrow search with quotation marks (or with <i>and, or. . .</i>).	Initial search results (# of hits):	Narrowed search results (# of hits):
<input type="checkbox"/> Refine search with tool bar (select the desired information). <input type="checkbox"/> Refine search with revised key terms, if applicable.	Narrowed search results (# of hits):	
<input type="checkbox"/> Use the search results that appear most trustworthy. Did commercial sites appear in the search? <div style="margin-left: 40px;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </div>	Based on your search results, list 3 sources you deemed trustworthy. Write the URL below. 1. 2. 3.	

Evaluate for Reliability and Accuracy [Evaluate each source]

Check each item as completed	Explain		
<input type="checkbox"/> Using the sources, what can you tell? Decide if the website is reliable. <i>Ex: This website might be reliable because it is an educational website (.edu)</i>	Source #1	Source #2	Source #3
<input type="checkbox"/> Examine the content of the website and the publication date. Is the information current? How do you know?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Truncate the website to determine the publisher of a website. Ask about the author and the owner. What can you tell? <input type="checkbox"/> Who is the host?			
<input type="checkbox"/> Look at the links associated with the website. Do they seem trustworthy? Why or why not? <input type="checkbox"/> Click on the hyperlinks	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Synthesize/Comprehend Information [Content of each source]

Check each item as completed	Explain		
<input type="checkbox"/> Determine the most important information in the text	Source #1	Source #2	Source #3
<input type="checkbox"/> Use visuals to determine main idea			
<input type="checkbox"/> Investigate hyperlinks and other media			
<input type="checkbox"/> Paraphrase main points you want to share			

Organize and Communicate Information [Prepare to Present]

Check each item as completed	Explain
<input type="checkbox"/> Use Web-based tools like Diigo to save or bookmark information	
<input type="checkbox"/> Cite information. List resources.	Sources:
<input type="checkbox"/> Determine what information you wish to share	
<input type="checkbox"/> Select the medium with which to share the information	
<input type="checkbox"/> Outline your presentation	

Figure 2. Web Literacy Checklist for student use.

Locating. The first part of the search process involves locating information. Therefore, the first section of the checklist includes a list of items students may refer to as they complete tasks related to locating information. As indicated on the checklist, locating information is identified as *the search*. On the left side of the checklist, students mark each item as completed. The right side of the checklist provides space for students to explain the search. Each checklist item was developed to guide students through a search in order to help them attend to ways to successfully find desired information. One goal of this section is for students to determine three sources they deem trustworthy.

When instructing students to narrow searches, we recommend teachers use search engines that display the numbers of hits. Google junior or Google kids are options which were developed for student use and provide assurance that search results do not include inappropriate content. Additionally, these search engines allow students to view the number of hits found as a result of the search. Teachers may select one topic for all students to search in order to model the search process. Keep in mind, the checklist would not be completed in one setting. Instead, the process would take place over a period of time, depending on the grade level

or the time available for research. Before proceeding to section two, the teacher should review the sources students have selected to monitor student skills. In the application of the checklist trials, it was discovered that iPad searches using Safari will not track results.

Evaluating. The next part of a search involves evaluating information. Therefore, the second section of the checklist includes a list of items students may check as they complete tasks related to determining the accuracy of online information. Again, student check boxes that guide the evaluation process and explain their thinking/analysis of each selected source. This activity reinforces critical thinking, as students examine content and author information. Some of the tasks require modeling. For example, teacher may demonstrate how to “truncate” a website, which means to shorten the URL to get to a home page. A website effective for modeling purposes is <http://zapatopi.net/treeoctopus/>, which presents information about a “tree octopus.” Initially, this site appears legitimate. However, upon further inspection, it becomes apparent the tree octopus is a fictional animal and elements of the website become questionable. Once the website is truncated to <http://zapotopi.net>, the students can use provided text to learn that the website’s author is not a scientist qualified to present factual information about an octopus.

Synthesizing. The next part of a search involves synthesizing information. Synthesizing information requires students to process and interact with online material rather than copying and pasting information. In other words, “online reading comprehension” skills are applied, as students seek to develop main ideas by accessing prior knowledge, making inferences, and connecting information across texts. According to researchers, online reading comprehension requires additional skills, beyond those required during offline reading comprehension (Coiro & Dobler, 2007; Leu, Kinzer, Coiro, & Cammack, 2004; Leu, Forzani, Timbrell, & Maykel, 2015). These skills may involve the ability to use hyperlinks to investigate information relevant to the topic. The skills may be as simple as using various media (photos or videos) to gather information and to determine important information. According to Leu, et al. (2015), the student must be able to summarize important elements from websites in the research task to develop an argument (p 141). Therefore, the third section of the checklist includes a list of items students may check as they complete tasks related to understanding and rewording the acquired information. This section prompts students to paraphrase information in an effort to eliminate plagiarism.

Communication. Classroom research typically involves some type of report or presentation, where students share their work with the teacher and peers.

Part four of the checklist enables students to plan for their final presentation in order to communicate and disseminate information. The checklist provides guidance for organizing research and determining the format of a presentation. This part of the checklist may be omitted, depending on the purpose of the research.

Summary

A 2014 study, with teachers implementing a Web literacy activity, inspired the creation of Web literacy strategies for teachers' use in the classroom. Skills required for Internet searches can be scaffolded, just as traditional pen and paper tasks can be scaffolded in the classroom. For example, Pilgrim and Hougen (2014) created a checklist to scaffold comprehension of difficult text. The checklist reminds students to apply the universal strategies good readers use before, during, and after reading. Students "check off" the suggested strategies as they engage with the text. Our Web literacy checklist works in a similar fashion—it utilizes a "checklist" format to remind students to attend to certain Internet features as well as evaluation skills required during online navigation. Instructional practices for literacy have traditionally included strategies to support student learning. Both the SEARCH acronym and the Web Literacy Checklist support skills related to locating, evaluating, synthesizing, organizing, and communicating information on the Internet.

We concur with ALER's president, J. Helen Perkins, that research should be used to inform instruction. Our 2014 study indicated a need to provide scaffolded instruction as students conduct Web searches. Students of all grade levels and all subjects could benefit from opportunities to interact with online information. Leu, et al. (2015) assert that "the most essential technologies and instructional practices for literacy are those that enable students to learn from online information" (p. 145). As sources of digital information continue to multiply and become readily available for consumption, teachers and researchers alike must consider ways to support learners as they encounter both reliable and unreliable information.

References

- Cassidy, J., Grote-Garcia, S. & Orlieb, E. (2015, September/October). What's hot in 2016: Recognizing new trends and celebrating 20 years of data. *Literacy Today*, 33(2) 12-16.
- Coiro, J. & Dobler, E. (2007). Exploring the online reading comprehension strategies used by sixth-grade skilled readers to search for and locate information on the Internet. *Reading Research Quarterly*, 36, 378-411.

- Dalton, B. (2015). Charting our path with a Web literacy map. *The Reading Teacher*, 68(8), 604-608.
- International Reading Association (2009). *New literacies and 21st century technologies: A position statement of the International Reading Association* (IRA PS 1067). Retrieved from <http://www.reading.org/General/AboutIRA/PositionStatements/21stCenturyLiteracies.aspx>
- International Society for Technology in Education (2012). National education technology standards for students. Retrieved from <http://www.iste.org/standards/nets-for-students>
- Leu, D.J., Forzani, E., Timbrell, N., & Maykel, C. (2015). Seeing the forest, not the trees: Essential technologies for literacy in the primary grade and upper-elementary grade classroom. *The Reading Teacher*, 69(2), 139-145.
- Leu, D. J., Kinzer, C. K., Coiro, J., Castek, J., & Henry, L. A. (2013). New literacies: A dual-level theory of the changing nature of literacy. In D.E. Alvermann, N.J. Unrau, & R.B. Ruddell (Eds.), *Theoretical Models and Processes of Reading* (pp. 1150-1180). Newark, DE: International Reading Association.
- Leu, D. J., Kinzer, C. K., Coiro, J. L., Cammack, D. W. (2004). New literacies: Toward a theory of new literacies emerging from the internet and other information and communication technologies. *Reading Online*. Retrieved from <http://www.readingonline.org/newliteracies/leu/>
- Mozilla (2014). Mozilla Web Literacy Map – 1.1.0. Retrieved from <https://webmaker.org/en-US/literacy>
- November, A. (2008). *Web literacy for educators*. CA: Sage Publications.
- Perkins, J. H. (2015, November). *Examining the Research of the Association of Literacy Educators and Researchers through the Lens of Social Justice*. Speech presented at the meeting of the Association of Literacy Educators and Researchers conference, Costa Mesa, CA.
- Pilgrim, J., & Hougen, M. (2012). *Universal reading strategies good readers use*. Module 7, Handout 7H, Texas College and Career Readiness Initiative. The University of Texas at Austin: Meadows Center for Preventing Educational Risk. Retrieved from <http://www.txfacultycollaboratives.org/ccri-course/module-7#reading-resources>
- Pilgrim, J., & Martinez, E. (2015). Web literacy and technology integration: Moving beyond TPACK with student-centered instruction. *Journal of Literacy and Technology*, 16(2) 121-153.
- U.S. Department of Education, Office of Educational Technology (2010). *Transforming American education: Learning powered by technology*. National Educational Technology Plan. Retrieved from <http://www.ed.gov/sites/default/files/NETP-2010-final-report.pdf>.

TEACHERS BRIDGE DISCIPLINARY LITERACY THROUGH A CULTURE OF ASSESSMENT AND TECHNOLOGY

Diana J. Quatroche
Indiana State University

Kathryn L. Bauserman
Indiana State University

Eric M. Hampton
Indiana State University

Abstract

Enhancing Disciplinary Literacy using Technology and Assessment (EDLUTA) was a program designed collaboratively by university teacher education and science faculty along with school district secondary education coordinators to facilitate professional development for classroom teachers. It was developed to promote a systematic, sustainable professional development program to train K-12 classroom teachers in using assessment and technology to enhance student learning in the disciplines. The major objective of the program was to implement professional development for teachers in high needs schools that would help students achieve mastery of state content standards using assessment and technology to guide their instructional planning. This article describes the evaluation of its effectiveness. A comparison of pre and post workshop teacher feedback indicates that teachers grew significantly in their confidence levels and abilities to use formative assessment and technology, and that student learning was positively impacted by intentional planning by teachers to increase formative assessment and technology use in their instructional planning.

Learning Forward (2013), formerly known as the National Staff Development Council, defines professional development as a comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). This definition, which is in the reauthorized version of No Child Left Behind (NCLB) (2002), also includes sustainability, collaboration, and job-embedded coaching. The importance of leadership in the planning and design of professional learning opportunities for educators and specialized instructional support personnel such as interventionists, counselors, school psychologists and others has been identified as a critical factor (Wei, Darling-Hammond, & Adamson, 2010). Having a comprehensive professional development plan is essential for designing models of professional learning that are ongoing and lead to increased educator and staff effectiveness as well as positive student outcomes. These parameters have been followed in order to develop and implement professional development targeted at assessment for instruction in disciplinary literacy and at using technology for learning in the classroom. The name of the professional development program was called Enhancing Disciplinary Literacy using Technology and Assessment (EDLUTA). The purpose of EDLUTA was to implement professional development for teachers in high needs schools that would help students achieve mastery of state content standards using assessment and technology to guide their instructional planning. The purpose of the evaluation was to assess whether the professional development program led to significant increase in teacher efficacy in creation and usage of formative and summative assessments.

Teacher Professional Development

The view of professional development as a two-hour “make-it-and take-it” workshop is a thing of the past. Effective professional development requires a much deeper investment in time and energy as teachers reflect on their pedagogy and their instructional practice. Donnelly and colleagues (2005) speak of a process of transformative professional development that compels teachers to examine their teaching philosophy and challenge it. Teacher learning can take place in their own classroom, the school community, and professional development initiatives (Borko, 2004). Looking for commonalities in the research, we found the following five traits that describe effective professional development:

- (1) Professional development is instructive. It supports teachers as they gain content knowledge and acquire instructional strategies (Guskey,

2003; Long, 2012). In addition, teachers should do additional independent research to keep abreast of the latest research in their respective fields (Kedzior, 2004).

- (2) Professional development is reflective. Teachers need to reflect deeply on theory-based practice (Brooke, Coyle, & Walden, 2005; Kedzior, 2004), and they need to reflect over time (Donnelly et al., 2005).
- (3) Professional development is active. Teachers are thinkers and intellectuals. They should be engaged in the learning process (Donnelly et al, 2005). Teachers need to learn many instructional strategies so they have a large repertoire from which to choose (Darling-Hammond, 2000). Classroom action research projects are another important step in helping teachers become actively engaged in their own professional development (Kedzior, 2004).
- (4) Professional development is collaborative. It goes beyond the classroom and should focus on school improvement and/or district improvement (Donnelly et al, 2005; Guskey, 2003; Long, 2012). Teachers should be engaged in study groups to challenge themselves and expand their thinking (Hurd & Licciardo-Musso, 2005; Mahn, McMann & Musanti, 2005).
- (5) Professional development is substantive. It should be extensive and continuous. There should be significant hours from a minimum of six, and for greater impact as many as thirty-five or more hours (Kedzior, 2004; Long, 2012).

When professional development has the traits of being instructive, reflective, active, collaborative, and substantive it will likely be more effective. This means that teachers and school staff are more highly qualified and, therefore, they will have a positive impact on student learning (Darling-Hammond, 2000; Guskey, 2003; Kedzior, 2004; Long, 2012).

Current methods for the effective delivery of professional development may include coaching, webinars and seminars, mentoring, use of experts in the form of consultants, attendance at conferences, and the participation in on-line networks (Darensburg, 2010). In the past professional development was usually in the form of a staff development day which included an “expert” who delivered information related to curriculum or some other area a school district decided was of interest. However, rarely did the one-day staff development presentation or workshop include follow-up or was it implemented by teachers in their classrooms (Darensburg, 2010).

Planning for Sustainability

There are many challenges to sustaining professional development partnerships and initiatives. However, Bier, Foster, Bellamy & Clark (2008) offer principles that help to foster sustainability. One principle to keep in mind is forming and sustaining basic agreements regarding the partnership. All parties need to ensure that the various priorities of the partners and the commitment to the partnership can be mutually supportive. The partnership should be organized to support the expanded objectives of the partnership. We have worked with partners to develop mutual goals based on the needs of the particular schools.

For sustainability of professional development to take place, districts must plan for duration of a project (Garet et al., 2001). Teachers need time to try out new things in their classrooms, get feedback, and then engage in in-depth reflective discussions. New practices can be sustained over time when the focus of the professional development is a group of teachers from the same school. Utilizing instructional units for teaching helped teachers to implement their own learning in the classroom and provided opportunities for teachers in year 1 to share their unit projects with participants in the year 2 summer workshop.

Value of Formative Assessment

There is a great deal of research that demonstrates the value of using formative and summative assessments to increase student learning. Jacoby, Heugh, Bax, and Branford-White (2014) found that students who took weekly formative assessment tests produced higher grades in science. In addition, students reported that taking the weekly tests was helpful in their study of the content because the students felt responsible for their own learning. Several research studies showed evidence of positive impacts from formative assessments in case studies (Koh, Lim, Tan, and Habib, 2015; Stewart and Houchens, 2014). In both case studies, students mastered content more easily through the regular use of feedback from formative assessments. Phelan, Choi, Vanderkinski, Baker, and Herman (2011) used formative assessments to aid students learning math concepts and skills. They reported positive results for math learning as a result of the use of these assessments. Finally, Stantopietra (2011) reported positive impact on student learning when formative assessments were used. Nordum, Evans, and Gustafsson (2013) found that formative assessment was most useful to the learner when it was furnished as feedback and in-text commentary, rather than just as a correct/incorrect answer to test or quiz questions.

Yu and Li (2014) studied the impact of group-based formative assessment reviews with individual formative assessment review. They discovered that students who participated in group-based formative assessment had significantly

higher test scores than the students who participated in the individual-based formative assessment reviews. Survey results also indicated that students preferred the group-based formative assessment review method. Furthermore, Keefe and Eplion (2012) reported that positive feedback benefitted student learning in business classes. Deeper analysis provided support that there was a motivating benefit beyond the feedback received. Finally, Wininger and Norman (2005) summarized previous literature and found that formative assessment required three key aspects that improved student learning: (1) instructors modified instruction based on formative assessment results, (2) students adapted their learning based on the feedback, and (3) students had greater motivation to learn.

Technology as a Tool for Learning

The use of technology as a tool for learning has been the subject of much recent research. Krentler and Willis-Flurry (2005) reported on the use of online discussion boards. They found that the use of discussion boards had a positive impact on student learning. Wallace (2011) found that the use of interactive white boards by classroom teachers to model and demonstrate lessons also had a positive impact on student learning. Ritzhaupt, Dawson, and Cavanaugh (2012) found that when professional development opportunities helped teachers become more comfortable with using technology, teachers used more technology in their teaching. When teachers used more technology, their students in turn used more technology as tools for learning. Although the study did not address whether the use of technology positively impacted student learning, Tamin, Bernard, Borokhovski, Abrami, and Schmid (2011) summarized the results from 1,055 studies of technology use and its impact on student learning and reported medium effect sizes.

Development of the EDLUTA Professional Development

This state-funded professional development grant was ultimately designed to support students in high needs districts, as they would benefit most from effective teachers who know how to use assessments to inform their teaching and how to use technology to bring 21st century skills to their students. EDLUTA had as a major strategic objective: the implementation of an effective sustained professional development program. The grant concentrated efforts on the teachers at schools exhibiting a large number of at-risk children. This pool of participants was solicited from districts across the state inviting teachers to experience a five-month program of professional development.

The focus of the program was to deepen teachers' understanding of the assessment process and how the results of formative and summative assessments can be used to support learning in the content areas. This program was designed to help teachers who in turn would help students achieve mastery in the following content standards:

- (1) **Informational Text:** The state standards require the use of more informational texts across all content areas and throughout the school day.
- (2) **Literacy Standards for all Content Areas:** Content-area teachers are not English teachers by training, therefore, they need to understand disciplinary literacy approaches and teaching strategies for their specific content areas.
- (3) **Text Complexity:** Students must have opportunities to read challenging texts. Content area teachers need to know how to determine when a text for their discipline is too easy or too difficult for students to read and how to make informed decisions regarding text selections.
- (4) **The Special Place of Argument:** Arguing and informing/explaining are crucial disciplinary literacy skills in the state standards. Content area teachers need to learn how to improve the writing skills required for their content areas.

Teachers who participated in the summer training created a teaching unit that they implemented in their classrooms. Teachers collected and analyzed results of formative assessment tied to each lesson in the unit during implementation. Furthermore, the professional development was designed for sustainability through a train-the-trainer component. Former participants shared their ideas for formative assessment, technology use, attended seminars, and assumed instructional duties.

Workshop Framework

This group of approximately 68 participants experienced 35 contact hours of professional development over the course of 5 months. During the summer they participated in a one-week intensive workshop. During the academic year, participants planned and implemented a one to two week teaching unit in their classrooms and engaged in two follow-up meetings where they reviewed their work with students and reflected on the success of their instruction. After the summer workshop and follow-up meetings participants received three hours of graduate workshop credit, funded by the grant.

Over the course of the academic year benefits to the participants included:

1. Continuous contact hours of professional development;
2. Access to information and presentations via technology tools;
3. An uninterrupted professional-development workshop which first presented information to the participants, then had the participants test this in an authentic setting (their own classroom) and finally reflect and evaluate the results within the seminar setting;
4. All course materials as part of the grant funding including the following texts:
 - *So What Do They Really Know: Assessment that Informs Teaching and Learning* (Tovani, 2011)
 - *Enhancing Disciplinary Literacy Using Technology and Assessment: Teacher Resource Book* (Bauserman & Quatroche 2013).
 - A variety of course readings on the topics of disciplinary literacy, assessment and technology.

Course content emphasized disciplinary literacy research and methodology, based on meaningful content knowledge. It included the following components: summative and formative assessment; assessment for learning; development of web-quests that addressed varying levels of student abilities; and train-the-trainer framework. The EDLUTA model served all students, especially at-risk students, as it also successfully challenged average and high achieving students. It addressed traditional standards for basic skills and addressed the “basics of the future” including learning to learn, learning to love learning, creativity, and problem solving (Perkins, 2016).

Evaluation of the effectiveness of the EDLUTA Professional Development model

Evaluation for EDLUTA focused on impact and outcome of the professional development sequence. The quality of the professional development experiences was evaluated using the Workshop Effectiveness Questionnaire, created by the authors. Changes in teacher efficacy and attitude toward the creation and use of formative and summative assessments were assessed using the Assessment Confidence Inventory, which we also created. This instrument was administered at baseline, post-workshop, and as a follow-up at the conclusion of the induction meetings. The research questions were developed as a means to evaluate the effectiveness of the EDLUTA professional development model.

Research Questions:

1. How did teacher participants rate the effectiveness of the professional development workshop?
2. Did the professional development sequence lead to significant increase in teacher efficacy in usage of formative and summative assessments from baseline to post-workshop and follow-up?

Methods

The EDLUTA professional development program was evaluated using a quantitative approach. Descriptive pretest/posttest/follow-up analysis as well as ANOVA analysis were performed. Data were analyzed using repeated measures analysis to determine whether there were significant changes in teachers' understanding of formative and summative assessment for the purposes of instruction due to the professional development.

Setting and Participants

The targeted school districts for EDLUTA are geographically located on the east, central, and west borders of a midwestern state. The economic challenge in these school districts is great. Over half of the students are eligible for free and reduced price lunch, and, in fact, exhibit a greater percentage of free and reduced price meals than the average in the state.

Participants in the program were 68 classroom teachers in elementary, middle, and high school grades and from participating EDLUTA high-need school districts, one large urban, one small urban, and one small rural district. All schools had an established history of collaboration with the university through either former grant involvement or professional development school initiatives. The teachers came from thirty-two public schools in sixteen school districts.

Data Collection and Analysis

This analysis combines participants across year one of the project ($N = 38$) and year two of the project ($N = 30$). Participants engaged in an intensive four-day summer workshop at each site. The sequence continued with induction meetings throughout the subsequent fall semester. Data on participant ratings of workshop effectiveness were gathered immediately following their summer workshop. These data were analyzed using descriptive statistics. Data on efficacy in using formative and summative assessments were gathered at the beginning

of the summer workshop, at the conclusion of the summer workshop, and at the conclusion of the induction meetings. These data were analyzed using repeated measures analysis of variance to assess for significant change across the three administrations.

Results

Workshop Effectiveness Questionnaire

Participants were asked to reflect upon the overall quality of the provided training at the end of each summer workshop. Participants rated the overall effectiveness in terms of overall quality, materials, instruction, skill gained, use of information in the classroom, and sharing of information with colleagues. Using a five-point rating scale assessing levels of agreement with items stems (5 = strongly agree; 1 = strongly disagree), nine questions were used to assess the quality of the training. Additionally, participants were asked to rate the effectiveness of the provided instruction in four areas targeted by the workshop. Four questions, using a five-point effectiveness rating scale (5 = very effective; 1 = not effective), measured the effectiveness of instruction in the areas of formative assessment, summative assessment, technology used for instruction, and technology used for assessment. Means and standard deviation for the workshop quality questions are presented

TABLE 1
Workshop Effectiveness Questionnaire, Quality of Training Item Means and Standard Deviations (N = 68); Year One and Two Combined

Item	Mean	SD
The workshop overall was of high quality	4.41	0.67
The materials used were of high quality	4.41	0.70
The instruction was of high quality	4.40	0.81
The instructors were well prepared	4.49	0.72
I gained skills useful for my classroom work	4.74	0.44
I will use the information learned in my classroom	4.72	0.48
I will share information learned in the workshop with colleagues	4.60	0.65
The workshop atmosphere was conducive to learning	4.51	0.68
The information learned in the workshop will be useful in classroom application	4.63	0.64

Scale: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree.

in table 1. Means and standard deviations for the effectiveness questions are presented in table 2.

Participant responses provide evidence that the workshop was of high quality in regard to all measured indices. The means of all nine items were above 4.39 on a five-point scale, with five means above 4.50. Items rated as particularly high include gaining skills useful for classroom work ($M = 4.74$) and using the learned information in their classroom ($M = 4.72$). Means for quality of training items ranged from 4.40 (instruction was of high quality) to 4.74 (gained skills useful for my classroom work).

Items on assessment and instruction use were specifically utilized to assess the effectiveness of instruction in the four areas representing the majority of the provided training. Participants were asked to rate the effectiveness of workshop instruction on formative and summative assessment as well as technology used for instruction and assessment. While the means in all four areas are above 4.12 on a five-point scale (indicated effective to highly effective training), there is a clear difference between effectiveness of training in formative assessment ($M = 4.75$) and summative assessment ($M = 4.13$). Similarly, training on technology used for instruction ($M = 4.49$) was seen as more effective than training on technology used for assessment ($M = 4.18$).

Assessment Confidence Inventory

The Assessment Confidence Inventory (ACI) was administered to participants to assess change in participant confidence in the creation and usage of formative and summative assessments. The ACI is a 25 item inventory in which participants report their level of confidence in assessment creation and utilization using a five-point confidence scale (5 = very confident; 1 = not at all confident). Participant confidence in assessment was measured as a pretest (at the beginning of the workshop training), as a posttest (at the end of the workshop training), and as

TABLE 2
Workshop Effectiveness Questionnaire, Effectiveness Item Means and Standard Deviations (N = 68); Year One and Two Combined

Item	Mean	SD
Formative assessment	4.75	0.50
Summative assessment	4.13	0.81
Technology used for instruction	4.49	0.66
Technology used for assessment	4.18	0.99

Scale: Very Effective 5 4 3 2 1 Not Effective.

a follow-up measure (at the end of the course). The ACI demonstrated strong internal consistency; the alpha coefficients of .95 at pretest, .94 at posttest, and .93 at follow up administration. Means and standard deviation for participants at these three points of measurement combined across both years of the workshop are presented in table 3.

ACI item descriptive statistics measured at the three intervals show dramatic growth from pretest to posttest. For most items, a mean increase is also noted from posttest to follow-up, though this level of growth is much less than that comparing prior confidence to post workshop confidence. For a few items, a slight decline is noted from posttest to follow-up. In no case is there a large drop in mean confidence levels between posttest and follow-up.

Item means at pretest range from a low of 2.66 (evaluating the reliability and validity of published summative assessments) to a high of 4.05 (grading student work). A mean of 3.00 would indicate that participants were at the midpoint of the scale in terms of confidence. Means between 2.50 and 3.50 should be considered to functionally be at this midpoint. At pretest, 15 of the 25 items are within this range. Only on one item (grading student work) did participants start the training with a good degree of confidence (mean confidence rating at or above 4.00).

A dramatic shift is noted on mean confidence across items following the workshop training. At posttest, item means ranged from a low of 3.79 (explaining standardized test results to parents) to a high of 4.74 (understanding of formative classroom assessment; using varied forms of formative classroom assessment). All item means increased upon posttest, with 21 item means above 4.00 at posttest. Item mean increases upon posttest ranged from 0.50 (grading student work) to 1.44 (matching assessment type to educational target), with an average mean increase of 0.96 across the 25 items.

Item means upon follow-up testing at the end of the induction meetings remain relatively stable, with 21 items showing an increase at follow-up and 4 items showing decrease. Item mean increases upon follow-up ranged from 0.02 (providing effective assessment feedback to students) to 0.39 (explaining standardized test results to parents). Item mean decreases upon follow up ranged from 0.01 (building assessment items of varied response) to 0.10 (building assessment items requiring varied levels of thinking). The overall average mean increase across all items from posttest to follow-up is 0.15. At follow-up, item means ranged from 4.00 (evaluating the reliability and validity of published summative assessments) to 4.85 (understanding of formative classroom assessment), with all items demonstrating a follow-up mean at or above 4.00.

A repeated-measures analysis of variance (ANOVA) was utilized on each ACI item to assess for significant change over time. This resulted in 25 inferential

TABLE 3
Assessment Confidence Inventory Descriptive Statistics (N = 61); Year One and Two Combined

	Pretest		Posttest		Follow-Up	
	Mean	SD	Mean	SD	Mean	SD
1. Understanding of formative classroom assessment	3.38	0.93	4.74	0.44	4.85	0.40
2. Using summative assessments to measure student learning relative to content standards	3.33	0.95	4.50	0.54	4.68	0.50
3. Using unit assessments to gauge student learning	3.59	0.86	4.46	0.65	4.62	0.58
4. Setting instructional goals based on assessment results	3.52	0.89	4.39	0.58	4.66	0.57
5. Using standardized test results in differentiating instruction	3.12	0.93	3.95	0.65	4.29	0.79
6. Understanding and interpreting standardized test results	3.36	0.86	3.90	0.85	4.21	0.86
7. Evaluating the reliability and validity of published summative assessments	2.66	0.90	3.80	0.80	4.00	0.74
8. Explaining standardized test results to parents	3.08	0.92	3.79	0.84	4.18	0.79
9. Creating end-of-unit or chapter tests	3.95	0.76	4.49	0.63	4.68	0.51
10. Creating end-of-term tests	3.82	0.85	4.43	0.65	4.65	0.52
11. Creating assessment rubrics	3.48	0.79	4.25	0.65	4.51	0.65
12. Using assessment rubrics	3.67	0.87	4.48	0.63	4.66	0.61
13. Building assessment items requiring varied levels of thinking	3.20	0.95	4.49	0.60	4.39	0.71
14. Building assessment items of varied response	3.46	0.92	4.57	0.56	4.56	0.67
15. Using varied forms of formative classroom assessment	3.51	0.89	4.74	0.48	4.85	0.44
16. Using varied forms of summative assessments	3.38	0.88	4.41	0.62	4.66	0.63
17. Establishing content validity of developed assessments	3.08	0.88	4.13	0.78	4.28	0.69
18. Matching assessment type to educational target	2.89	0.88	4.33	0.70	4.30	0.69

	Pretest		Posttest		Follow-Up	
	Mean	SD	Mean	SD	Mean	SD
19. Grading student work	4.05	0.72	4.55	0.57	4.68	0.47
20. Evaluating a constructed response from a student assessment	3.57	0.74	4.33	0.66	4.58	0.56
21. Explaining assessment results to students	3.65	0.78	4.43	0.59	4.68	0.50
22. Involving students in the assessment process	3.28	0.85	4.38	0.61	4.43	0.67
23. Using peer assessment in the classroom	3.10	0.81	4.25	0.72	4.20	0.81
24. Using student self- assessment	3.07	0.83	4.20	0.68	4.34	0.79
25. Providing effective assessment feedback to students	3.38	0.82	4.54	0.59	4.56	0.65

tests. Given the risk of experiment-wise type-1 error rate inflation given this number of inferential tests, a conservative alpha rate of .001 was used as the standard for concluding significant change. Data from these repeated measure ANOVAs, including degrees of freedom values, resulting F statistics, and partial eta-square (as a measure of effect size) are presented in table 4.

A consistent pattern of change is demonstrated in repeated measures ANOVA analyses for ACI items. For three of the items (items 1, 2 and 25), sphericity could not be assumed, so a conservative Greenhouse-Geisser F test (which adjusts the degrees of freedom as displayed in Table 2) was utilized to protect against this violation. All 25 items demonstrate significant change across testing conditions at the .001 alpha level. The item mean increases (notably from pretest to posttest) are sufficiently large to suggest that chance is not causing these differences. Rather, the workshop training appears to have significantly increased confidence in creation and utilization of assessment. Pairwise comparisons were made across times of testing to explore which testing times differed significantly (utilizing an alpha of .001). The pattern of change across levels is consistent across items. In all cases, the significant increase is found from pretest to posttest. Some items do show growth from posttest to follow-up, but none reached significance at the .001 alpha level.

Partial eta-square values were calculated to assess the magnitude of the significant change, providing a measure of effect size. Partial eta-square values for the 25 items demonstrating significance ranged from .31 (creating end-of-unit or chapter tests; grading student work) to .67 (understanding of formative

TABLE 4
Assessment Confidence Inventory Repeated-Measures ANOVA Results; Year One and Two Combined

<i>* = statistically significant at $\alpha = .001$.</i>	DF Between	DF Error	<i>F</i>	Partial Eta-Square
1. Understanding of formative classroom assessment	1.41	84.29	121.77*	.67
2. Using summative assessments to measure student learning relative to content standards	1.43	84.13	92.62*	.61
3. Using unit assessments to gauge student learning	2	120	58.70*	.50
4. Setting instructional goals based on assessment results	2	120	55.90*	.48
5. Using standardized test results in differentiating instruction	2	116	45.94*	.44
6. Understanding and interpreting standardized test results	2	120	28.00*	.32
7. Evaluating the reliability and validity of published summative assessments	2	116	95.70*	.62
8. Explaining standardized test results to parents	2	120	46.37*	.44
9. Creating end-of-unit or chapter tests	2	116	25.54*	.31
10. Creating end-of-term tests	2	116	30.85*	.34
11. Creating assessment rubrics	2	120	56.24*	.48
12. Using assessment rubrics	2	114	43.99*	.44
13. Building assessment items requiring varied levels of thinking	2	120	72.37*	.55
14. Building assessment items of varied response	2	120	58.75*	.50
15. Using varied forms of formative classroom assessment	2	120	99.34*	.62
16. Using varied forms of summative assessments	2	120	79.29*	.57
17. Establishing content validity of developed assessments	2	120	65.77*	.52
18. Matching assessment type to educational target	2	120	100.26*	.63

<i>* = statistically significant at $\alpha = .001$.</i>	DF Between	DF Error	<i>F</i>	Partial Eta-Square
19. Grading student work	2	118	26.95*	.31
20. Evaluating a constructed response from a student assessment	2	118	59.04*	.50
21. Explaining assessment results to students	2	118	53.51*	.48
22. Involving students in the assessment process	2	118	59.87*	.50
23. Using peer assessment in the classroom	2	120	62.49*	.51
24. Using student self- assessment	2	120	76.28*	.56
25. Providing effective assessment feedback to students	1.66	99.49	98.26*	.62

classroom assessment). Partial eta-square values at or above .30 are considered large effects. The effect sizes of these 25 items can be considered large to very large. Thus, a significant and also extensive increase in confidence occurred from pretest to posttest administrations.

Limitations

While evidence of significant increase in participant assessment efficacy is compelling, this research is not free of limitations. One limitation of this research stems from the nature of the data collection. Both the Workshop Effectiveness Questionnaire and the Assessment Confidence Inventory are self-report instruments. While this is fitting to address the research questions, it is limiting in that it lacks an independent observable criterion. However, we deemed it fitting that both perceptions on the workshop quality and efficacy and confidence with assessment be measured in this way. Attitudes towards the workshop and confidence in assessment are internal characteristics, which are appropriate for self-report instruments.

Additionally, participants were volunteer teachers from a limited number of districts in the state. Thus, while a logical case can be made that the results would generalize widely to teachers, this design lacks the ability to make a statistical argument for generalizing the findings to all teachers. While a large randomly selected sample of teachers would have been preferable to allow generalizing the findings, the feasibility of such a procedure is problematic for intensive professional development research.

Discussion and Implications

The workshop was successful in enhancing participants' perceptions about the importance of assessment and the use of technology for enhancing lessons. Teachers participated in a professional development program that was instructive, active, collaborative, and substantive. After teachers successfully implemented their teaching units, they reflected on their personal growth and learning.

School district professional development for these districts focused on the importance of using assessment to inform teaching and ways to incorporate technology into the classroom. The professional development also incorporated ways for teachers to adapt instruction using the results of formative assessment. As a result, this professional development resulted in positive change regarding participants' confidence in using assessment to guide instruction and their ability to incorporate assessment and technology into lessons. Additionally, another lesson learned as a result of this program is that the availability of technology in the classroom is quite varied among school districts, and even classrooms within districts. Finally, it was also noted that teachers need assistance in developing a varied collection of ideas for modification of instruction based on assessment results.

In conclusion, educators need on-going support, which includes teaching methods that will enable them to use a variety of assessments to guide their instruction and an understanding of how technology can be an asset in the classroom. In an era of accountability, the pressure of student success is palpable by both teachers and students. Innovative teaching strategies and approaches such as those that were part of EDLUTA can be important tools that support teachers in helping students achieve these goals.

Authors' Note

This program was supported by an Improving Teacher Quality Partnership Program grant (CFDA #CO208) from the Indiana Commission for Higher Education.

References

- Bauserman, K., & Quatroche, D. (2013). *Enhancing disciplinary literacy using technology and assessment: Teacher resource book*. Unpublished Manuscript.
- Bier, M., Foster, A.M., Bellamy, G.T., & Clark, R. (2008). Professional development school principals: Challenges, experiences, and craft. *School-University Partnerships: The Journal of the National Association for Professional Development Schools*, 2(2), 77-89.

- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 1-49.
- Brooke, R., Coyle, D., & Walden, A. (2005). Finding a space for professional development: Creating 3rd space through after-school writing groups. *Language Arts*, 82, 367-377.
- Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8(1), 1-44.
- Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Dallas, TX: National Staff Development Council. <http://www.learningforward.org/docs/pdf/nsdcstudy2009.pdf>
- Donnelly, A., Morgan, D., DeFord, D., Files, J., Long, S., Mills, H., Stephens, D., & Stysliger, M. (2005). Transformative professional development. *Language Arts*, 82(3), 234.
- Garet, M.S., Porter, A.C., Desimone, L., Burman, B.F., & Yoon, K.S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.
- Guskey, T. R. (2003). What makes professional development effective? *Phi Delta Kappan*, 81, 581-584.
- Hurd, J., & Licciardo-Musso, L. (2005). Lesson study: Teacher-led professional development in literacy. *Language Arts*, 82(5), 388-395.
- Jacoby, J.C., Heugh, S., Bax, C., & Branford-White, C. (2014). Enhancing learning through formative assessment. *Innovations in Education and Teaching International*, 51(1), 72-83.
- Kedzior, H. (2004). Teacher professional development. *Education Policy Brief*, 15, 1-6.
- Keefe, T., & Eplion, D. (2012). Motivational impacts of formative assessment: Evidence from a college classroom. *Global Education Journal* 2012(2), 58-92.
- Koh, K., Lim, L., Tan, C., & Habib, M. (2015). Building teachers' capacity in formative assessment: The Singapore example. *New Educational Review* 40(2), 211-221.
- Krentler, K.A., & Willis-Flurry, L.A. (2005). Does technology enhance actual student learning? The case of online discussion boards. *Journal of Education for Business* 80(6), 316-321.
- Learning Forward. (2013). Definition of professional development. Retrieved <http://learningforward.org/who-we-are/professional-learning-definition>
- Long. (2012). Professional development and education policy: Understanding the current disconnect. *Reading Today*, 29(3), 29-30.
- Mahn, H., McMann, D., & Musanti, S. (2005). Teaching/learning centers: Professional development for teachers of linguistically and culturally diverse students. *Language Arts*, 82(5), 378-387.
- No Child Left Behind Act of 2001. Pub. L. no. 107-110, 115 Stat. 1425 (2002).
- Perkins, D. N. (2016). Lifeworthy learning. *Educational Leadership*, 73(6), 12-17.

- Phelan, J., Choi, K., Vandlinski, T., Baker, E., & Herman, J. (2011). Differentiated improvement in student understanding of mathematical principles following formative assessment intervention. *The Journal of Educational Research, 104*, 330-339.
- Ritzhaupt, A.D., Dawson, K., & Cavanaugh, C. (2012). An investigation of factors influencing student use of technology in K-12 classrooms using path analysis. *Journal of Educational Computing Research, 46*(3), 229-254.
- Stantopietra, G.D. (2011). Effects of computerized formative assessment on student learning ineconomics. *Journal of Learning in Higher Education, 7*(1), 7-15.
- Stewart, T.A., & Houchens, G.W. (2014). Deep impact: How a job-embedded formative assessment professional development model affected teacher practice. *Qualitative Research in Education, 3*(1), 51-82.
- Tamin, R.M., Bernard, R.M., Borokhovski, E., Abrami, P.C., & Schmid, R.F. (2011). What Forty years of research says about the impact of technology on learning: A second-order meta-analysis and validation study. *Review of Educational Research, 81*(1), 4-28.
- Tovani, C. (2011). *So what do they really know: Assessment that informs teaching and learning*. Portland, ME: Stenhouse.
- Wallace, A. (2011). Effects of electronic formative assessments on achievement in years 7-8 mathematics. The Seventh International Scientific Conference on eLearning and Software for Education. Bucharest, April 28-29, 2011. Conference Proceedings, 5 pages.
- Wei, R. C., Darling-Hammond, L., & Adamson, F. (2010). *Professional development in the United States: Trends and challenges*. Dallas, TX: National Staff Development Council.
- Wininger, S. R., & Norman, A. D. (2005). Teacher-Candidates' exposure to formative assessment in educational psychology textbooks: A content analysis. *Educational Assessment, 10*, 19-37.
- Yu, H., & Li, H. (2014). Group-based formative assessment: A successful way to make summative assessment effective. *Theory and Practice in Language Studies, 4*(4), 839-844.

NARROWING THE DISCOURSE POSSIBILITIES: AN EXAMINATION OF SECOND GRADE CURRICULUM MATERIALS FOR TEACHING WRITING

Alayne Jorgensen, M.Ed.
Utah State University

Sylvia Read, Ph.D.
Utah State University

Abstract

Recently, expectations for young elementary students' writing achievement have increased substantially, largely due to the adoption of the Common Core State Standards (CCSS) in the United States. Per the CCSS writing standards, students need to be able to write routinely for a variety of purposes and audiences, including writing effective arguments, expository pieces, and personal narratives. Students are expected to plan, revise, edit, rewrite, conduct research, and use technology throughout the writing process. Using the lens of discourses of writing (Ivanič, 2004), we examined second grade curriculum materials from core literacy programs that purport to be aligned with the Common Core writing standards. Based on commonly accepted standards of effective writing instruction, we also delineate the pros and cons of each program.

Over the last few years, expectations for young elementary students' writing achievement have increased substantially, a fact that can largely be attributed to the adoption of the Common Core State Standards (CCSS) in the United States. The Common Core State Standards (CCSS) for English Language Arts

(ELA) have been adopted by the majority of states in the US and were designed to better prepare American students to be “college and career ready” (National Governors Association Center for Best Practices, 2010). Development of these standards was coordinated by the National Governors Association Center for Best Practices and the Council of Chief State School Officers. A panel of experts, teachers, and school administrators drafted the original standards, which were then revised based on feedback from organizations representing various educational groups. The implementation of the CCSS has the potential to become one of the most significant shifts in policy for American education (McDonnell & Weatherford, 2013).

One of the significant shifts within the CCSS is the elevation of writing to a central place with writing emphasized as a way for content knowledge to be developed and shared (Applebee, 2013). Per the CCSS writing standards, students need to be able to write routinely for a variety of purposes and audiences, including writing effective arguments, expository pieces, and personal narratives. Students are expected to plan, revise, edit, rewrite, conduct research, and use technology throughout the writing process.

For many states, the CCSS standards are also a shift in genre focus, giving much more specific attention to the informational genres. Traditionally, the focus for literacy in the primary grades has been narrative texts. However, the CCSS calls for a greater focus on informational genres for both reading and writing in the primary grades. Researchers call attention to the additional linguistic demands this focus and expectation for informational text genres can bring (Roberts, 2012).

While the CCSS are very specific about the results expected from student writing, they are not focused on the means to reach those standards. Districts, schools, and teachers must take on the challenge of determining the best way to help students meet the rigorous goals set by the standards. One resource that many educators are using in an attempt to improve student achievement for ELA standards is that of a core literacy program.

This can be a particular challenge for teachers to know how to provide instruction that will enable students to meet the rigorous writing standards set by the CCSS. The majority of districts and schools have adopted core literacy programs to give teachers resources for instruction in all literacy components. Some research studies have examined the reading components of core literacy programs. However, few, if any studies have investigated the writing components of core literacy programs. Therefore, we have little analysis of the writing components of core literacy programs and how those can aid in instruction of the CCSS.

The purpose of this study is to examine how the CCSS for writing are operationalized in core literacy programs through a content analysis of second-grade lessons from two programs. Specifically, this research concentrated on implications and predictions for classroom instruction for teachers who follow the writing components of core literacy programs with a high level of fidelity in implementation.

Literature Review

Core Literacy Programs

A core literacy program, formerly known as a basal reader, is a compilation of texts, support materials, lesson plans, and assessments put together in volumes or units for teacher use (Dewitz & Jones, 2012). As part of a core literacy program, teachers are typically provided with a large anthology of texts, as well as leveled readers, big books, and workbooks and/or journals. These resources are designed to be a comprehensive literacy program for schools, including reading skills, comprehension skills, phonics, fluency, spelling, vocabulary, and writing instruction. Recently published core literacy programs marketed for teaching Common Core standards have components for teachers to provide response to intervention, lessons for English learners, and differentiated instruction (Dewitz, Leahy, Jones, & Sullivan, 2010).

Through extensive interviews with the publishers of core literacy programs, Dewitz and Jones (2012) concluded that core literacy programs are written in a way that does not heavily focus on current literacy research. A group of authors, editors, graphic designers, and marketing experts develop programs that reflect market demands, teachers' wants, and research findings. The adoption of the CCSS brought about a new market demand for core literacy programs. Editors develop prototypical lesson plans, which focus groups review, but the actual writing of the program is done by other companies and freelance writers, not the initial group of authors. Dewitz and Jones (2012) conclude that, "The development of a core program is driven as much by market research as by reading research" (p. 392). This echoes the conclusions from textbook experts Chambliss and Calfee (1998) that core literacy programs follow education trends, but they rarely initiate new ideas and are market driven. The structure of core literacy programs is founded on unchanging repetitive instructional routines, moving students through a series of texts and tasks.

Regardless of the level of research upon which core literacy programs are based, use in schools is widespread and has continued for several decades. During a recent survey, about seventy-four percent of schools and teachers reported

either following a core literacy program closely or selecting from its sections (Education Market Research, 2010). Schools and teachers incorporate core literacy programs in various ways, ranging from following them with a high level of implementation “fidelity” to picking and choosing components to use with instruction. Regardless of the level of implementation, core literacy programs can provide teachers with a rich assortment of text and instructional tools, saving precious preparation time (Dewitz & Jones, 2012). Through a qualitative study, a research team (McIntyre, et al., 2005) studied the implementation of ten different reading programs over two years within 17 schools and 35 classrooms. From data analysis, researchers suggested three variables that affected the level to which teachers implement reading programs: teacher support, practicality and clarity of the models, and local context. Within this same study, researchers observed that one particular reading program may look completely different in one classroom over another, even when both are implementing them with high levels of fidelity.

The widespread use of core literacy programs over the last few decades has led researchers to investigate the design, content, and components of these programs. In 1981, Durkin conducted a content analysis of basal reading program teachers’ editions to evaluate comprehension instruction. Her conclusion was that basal reading programs provided teachers with reading comprehension practice and assessment but failed to provide them with recommendations and explicit instruction for teaching reading comprehension. Since that first landmark study, several studies have been conducted examining various aspects of core literacy programs such as the logicalness of the scope and sequence (Jitendra, Chard, Hoppes, Renouf, & Gardill, 2001), sufficient word practice and volume of text (Hiebert, 2009; Heibert & Brenner, 2010), the level of explicit instruction (Reutzel, Child, Jones, & Clark, 2014; Dewitz, Jones, & Leahy, 2009), quality of guided reading questions (McKeown, Beck, & Blake, 2009), and ability to build prior knowledge (Dewitz et al, 2010). All of these studies analyzed the reading components of the core literacy programs. However, as previously stated, core literacy programs are designed to be a resource for teaching all literacy components, including writing, and the most recently published core literacy programs advertise that they are targeted for instruction of the English language arts portion of the CCSS.

Writing and Core Literacy Programs

After searching multiple databases (*ERIC, Education Full Text, Education Full Text (H. W. Wilson), and Google Scholar*) using the terms *common core, core literacy program, core reading program, basal reader, and writing*, results showed only one empirical study where researchers investigated the writing portion of core literacy programs. Howard (1989) conducted a small-scale study to determine

the effectiveness of writing assignments as well as the extent to which teachers used the suggested writing assignments in the basal. For ten days, four fifth-grade reading teachers and their classes were observed. Participants reported that they regularly included written composition with reading instruction, but the results from observations indicated that three of the four teachers did not use any of the basal writing assignments, and one participant used only some of the writing assignments in the basal. Howard (1989) also examined writing instruction suggestions in the basal and found that the majority of writing activities were located in the enrichment section of the lessons, were not explicit about whether the students should write the assignments, and had little information for teachers to guide students through the writing process or to assess their writing.

Through this same literature search, we found no research that has been published regarding the writing instruction in core literacy programs since the adoption of the CCSS. Currently, then, the degree to which the writing components of core literacy programs can aid in teacher instruction of the CCSS is unclear. Given the widespread use of core literacy programs throughout schools, the focus the CCSS places on informational writing genres, and the rigor those standards require, there exists a compelling need to investigate the writing components of core literacy programs and how they operationalize the CCSS.

But what do the curriculum materials, ostensibly based on the CCSS, encourage teachers to do? Using the lens of discourses of writing (Ivanič, 2004), we examined second grade curriculum materials from core literacy programs that purport to be aligned with the Common Core writing standards. Based on commonly accepted standards of effective writing instruction, we also delineate the pros and cons of each program.

Theoretical Framework

Ivanič (2004) identified six discourses that are embedded in various approaches to teaching writing. This use of discourse refers to Gee's definition: a "socially accepted association among ways of using language, other symbolic expressions, and 'artifacts,' of thinking, feeling, believing, valuing, and acting which can be used to identify oneself as a member of a socially meaningful group" (Gee, 1996, p. 131).

The *skills discourse* of writing assumes that all writing draws on the same linguistic skills, no matter the context, of using sound-symbol relationships to form words, using syntactic patterns to form sentences, and using patterns of cohesion within and between paragraphs. Generally, the focus is on the prescribing the correct and accurate use of handwriting, spelling, punctuation, and sentence structure.

The *creativity discourse* of writing treats writing as a valuable activity that is meant to interest or entertain its reader, which means that what counts as good writing is less a matter of correctness than a matter of style and content. “Reading good writing by others provides a model and a stimulus for learning to write” (Ivanič, 2004, p. 229). Writing pedagogies that fit this discourse tend to encourage students to choose their own topics and write from what they know; therefore, personal narrative tends to be privileged over other modes of writing.

The *process discourse* of writing, in Ivanič’s framework, refers to both the cognitive processes that happen in a writer’s head and practical processes that writers can be taught, which means that “these beliefs about writing and learning to write are very attractive to teachers and policy makers, because they translate into a set of elements which can be taught explicitly and which have an inherent sequence” (p. 231). Pedagogies that invoke the process discourse use words like planning, drafting, revision, collaborate/collaboration, and editing.

With a primary emphasis on product, the *genre discourse* of writing nevertheless takes into consideration the social aspects of writing in that texts vary according to their purpose and context. This approach divides texts into categories according to their purpose: informing, describing, recounting, entertaining, persuading, etc., each with specific linguistic characteristics that can be taught. Modeling of the target text type includes teaching linguistic terminology. This approach is seen as “logical, systematic, down to earth, and teachable. . . . On the other hand, it is seen as prescriptive and simplistic, based on a false view of text types as unitary, static and amenable to specification” (Ivanič, 2004, p. 234). This view of writing, and how writing should be taught, privileges academic writing over other kinds of everyday writing.

The *social practices discourse* of writing, on the other hand, encompasses writing in all social and cultural contexts. In an educational context, it tends to take two forms, the functional and the communicative approach. The functional approach asks students to write texts to accomplish functional goals like applying for a job, whereas the communicative approach requires that the teacher look for authentic reasons to write to address an issue, solve a problem, etc. Or teachers must create contexts that simulate real-life purposes for writing. This approach does not lend itself to explicit teaching of forms or skills because the writing students would do is highly dependent on “the whole complex social interaction which makes up the communicative in which they are situated, and meaning is bound up with social purposes for writing” (Ivanič, 2004, p. 234).

Ivanič’s final discourse of writing is the *sociopolitical discourse*, which takes the social practices discourse to a critical level by foregrounding the relations of power inherent in all communication; it takes a critical literacy approach that

overtly teaches students to develop “a critical awareness of why particular discourses and genres are the way they are” (p. 238). Students are taught about how specific linguistic choices reflect the position of the writer and the reader and how to make decisions about words and symbols that represent the writer’s reality.

Methods

For this study, we chose to use deductive content analysis in order to determine the underlying belief systems of the curriculum materials that constituted my data set (Hoffman, Wilson, Martinez, & Sailors, 2011; Pershing, 2002). Two coders analyzed the content of the data set according to the six discourses identified by Ivanič (2004). Our coding sheet (see appendix) is based on the six discourses identified by Ivanič (2004). On the coding sheet, we also noted positive and negative features of each using a holistic review. Each researcher coded one unit and its lessons independently; then we met to calibrate our coding of this unit. The rest of the units were then coded independently.

Data

The curriculum materials that we analyzed were chosen because they are widely adopted programs that are aligned with CCSS; herein, they are referred to as Program W and Program J. From each program, we chose one complete set of lessons from each of six units in the second grade curriculum.

Research Questions

The following research questions guided this content analysis:

- Which discourses of writing feature prominently in the lesson plans that focus on writing?
- How do the elements of these two programs align with the recommendations in the research literature?

Results

Our analysis of six lessons plans from each second grade teachers’ edition of the Program J and Program W revealed that both programs overwhelmingly focus on the discourse of genre; however, only the surface features of the genre are the focus. For example, the teaching guidelines in the Program W program explain that the features of an explanatory essay are: it explains a topic clearly, provides

facts and definitions related to the topic, uses linking words to connect ideas, and ends with a concluding statement or section. In a more sophisticated version of the genre discourse, writing instruction would also “pay attention to the way in which the product is shaped by the event of which it is a part” and would emphasize that texts “vary linguistically according to their purpose and context” (Ivanič, 2004 p. 232). However, this is not the case in these programs. The text type is reified into a stable set of superficial features (e.g., explains topic, uses linking words) with no instructional guidance for the students (or the teacher) about why these features might be needed other than a brief command to the teacher to “tell children that an explanatory essay is a way for a writer to share information” (Program W, Grade 2, Unit 5).

Both programs also heavily emphasize discourse of skills. Program W places the skills focus in the context of editing and proofreading and connect them to the Common Core Standard W.2.5, “With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.” The instructional text explains that editing improves the target text, although it does not explain why or how it improves the text (e.g., helps the reader to understand, clarifies the meaning). Program J teaches grammar in isolated lessons interleaved among the writing lessons with objectives such as “form and use frequently occurring plural nouns with *-es* (Program J, Grade 2, Unit 2)” and “capitalize the first letter in the names of the days of the week” (Program J, Grade 2, Unit 3). These objectives are not tied to a Common Core language standard, as might be expected. The only Common Core standard referenced in the lesson is the writing standard that focuses on the genre of information text (Unit 2) or opinion pieces (Unit 3).

In Ivanič’s framework, the process discourse refers to both the cognitive processes that writers use and the practical processes that teachers might follow in their writing pedagogy. Both programs have elements of the process discourse of genre. Program W tells the teachers to “have children brainstorm ideas” and provides prompts for brainstorming. It also makes use of various graphic organizers that match each writing assignment and are meant to guide the planning stage of writing. In addition, each lesson is labeled with one or more stages of the writing process. Program J also labels each lesson with one or more of the stages in the writing process, but it also gives teachers some language to use for modeling. For example, it provides a text that teachers can use to guide a think aloud for pre-writing while filling out a graphic organizer that matches the writing assignment. There is also a think-aloud script available to teachers to guide them as they model drafting, but there are no directives to teachers to model; it is implied by the structure of the lessons.

Creativity, social practices, and sociopolitical discourses of writing are not emphasized at all in these two programs. Occasionally, the notion of creativity is invoked in a minor way when students are directed to add “interesting” details or visual. Descriptions of genres also occasionally invoke the social practices discourse when the purposes for writing are explained; however, because the purposes for writing in the lessons provided are not authentic, the connection to social practices is weak or non-existent. Finally, the sociopolitical discourse is absent entirely; the writing assignments all fit squarely into the purposes for writing that are school-sanctioned.

After conducting a holistic review of the writing lessons, positive and negative features were identified from each core literacy program. These features were determined through the researchers’ extensive knowledge of research in elementary writing instruction, and alignment with professional research-based recommendations from the What Works Clearinghouse IES guide for Teaching Elementary School Students to Be Effective Writers (Graham et al., 2012).

In Program J, the texts students are reading during a particular unit are also used as models for writing and grammar lessons in that same unit. This is a positive feature of the program because the models students are examining are authentic texts written by real authors for real purposes. This aligns with a recommendation from the IES guide to “teach students to emulate the features of good writing” and encourages teachers to “provide exemplary models of what students will write” (Graham et al., 2012, p. 22). These exemplary models could include authentic texts that support the instructional goals of the lesson such as published texts, books, the teacher’s writing, and/or peer samples that are appropriate for the students’ reading abilities.

In contrast to Program J, Program W does not coordinate reading and writing texts. For example, in a unit where the students are reading narrative texts, they are writing informational texts. Also, the texts used as models for writing in this same program are contrived texts provided by the publishers that were written expressly for the purpose of a model, and they would not be considered exemplary texts. The teacher is not prompted to model writing but rather to show the pre-determined models. The non-alignment of reading and writing texts and lack of exemplary texts are negative features of Program W. Fitzgerald and Shanahan (2000) recommended that educators should focus on the commonalities and shared thinking between reading and writing. They concluded that considering reading and writing separately may encourage unnecessary and inefficient instruction and may lead students to misconceptions. Especially because students in younger elementary grades are just beginning to learn different genres in both reading and writing, teaching two different ones at once could easily lead

to confused and overwhelmed students. Conversely, capitalizing on the similarities and connections between reading and writing may lead students to solidify knowledge as they apply it in multiple domains.

In Program W, the teacher is not prompted to model any part of the writing process or writing products but rather to “show” the models and then direct students to independently write. Program J has the teachers occasionally write a predetermined text in front of the students, but it includes think aloud as a more consistent pedagogical strategy. The IES guide recommends that writing should be taught through a “gradual release of responsibility” (Graham et al., 2012) and that “it is not enough to simply describe the strategy and show how to use it” (p. 17). A gradual release of responsibility starts with the teacher describing a strategy and modeling the use, then guiding students to work in groups, and finally encouraging students to apply the strategy independently when they are ready. Although neither program includes the independent stage of the gradual release of responsibility for writing tasks and strategies, Program J includes consistent use of guided practice and application.

Both programs direct students through the steps of the writing process in each unit to varying degrees. In Program J, there are six days in each unit. The first three days of each unit are spent on pre-writing activities and examination of model texts, and students do not actually write anything until the fourth day of the unit. In the Program W, the writing process is similar, but students start drafting on day two and spend more time actually writing. IES recommends for teachers to provide daily time for students to write, including 30 minutes of teaching writing strategies, and then 30 minutes of specific student writing practice (Graham et al., 2012). Neither of the programs quite meet this recommendation, so this is a negative feature in both programs. In addition, students do need to be taught each component of the writing process separately (pre-writing, drafting, revising, etc.), but once they understand the process they should be encouraged to be flexible in their use of the writing process components rather than continually moving in a strict ordered process through the steps. Neither program recognizes or encourages the recursive nature of the writing process.

Rubrics are used for revision and assessment in both programs. In Program J there is only one generic writing rubric provided for use in every unit, regardless of the text type, which is a negative feature. Although rubrics have a long history with writing, Williams (1998) found that in order to effectively improve writing, rubrics need to focus on specific tasks, clear-cut goals, and/or particular elements of the text. Program W does have genre and text-specific rubrics for each unit and has the teacher set a purpose and audience for each text type, a positive feature of Program W.

Instruction regarding conventions, including grammar and punctuation, is included in each program. In Program W, this instruction is embedded within the editing component of each unit. This is a positive feature because students are given instruction within the context of their writing, which they can then immediately apply their learning. In Program J, instruction regarding conventions and grammar is not included with the rest of the writing instruction but rather is a separate portion of the core literacy program where students complete worksheets targeted to the specific skill. This is a negative feature because the instruction is isolated and taken out of context. Also, some of the grammar and language instruction is labeled as an “ELL tip,” but the objectives are ones that all students should be taught (e.g., underlining a book title).

There are several writing instruction recommendations that are not utilized in either program and have not yet been addressed in this discussion. These include “teaching students to become fluent with handwriting, spelling, sentence construction, and word processing” and “creating an engaged community of writers” (Graham et al., 2012, p. 1). The fact that neither program includes effective instruction aligned with either of these recommendations is also a negative feature.

Discussion and implications

Because the English language arts standards in the CCSS create “a central place for writing within an integrated view of the language arts” (Applebee, 2013, p. 26) and make writing “the central way in which content knowledge is developed and shared” (p. 27), the potential for rich writing experiences for young children is exciting. However, the emphases for curriculum and instruction in the grade-by-grade CCSS are “formulaic and perfunctory,” thus narrowing the possibilities for writing instruction. Furthermore, because of the rush to create assessments based on the CCSS, teachers are focusing their instruction on teaching students to respond to prompts that are similar to the prompts they will face in the high-stakes on-demand writing tests (Applebee and Langer, 2011).

Beach (2011) argues that, although the CCSS are heavily influenced by a formalist paradigm that focuses on genre structures and forms, it is possible to adopt a social genre/literacy practices approach where students write in response to complex issues or problems rather than respond to prompts in formulaic ways. However, we can see from these two examples of core literacy programs that they focus on a formalist paradigm in keeping with the Common Core State Standards. Because of this, students are deprived of the opportunity to write in more authentic ways that acknowledge the social dimension of communication;

again, this narrows the discourse possibilities that could and should be addressed in an effective writing program. If teachers follow the guidelines set forth in these two programs, their instruction will not be in keeping with most up-to-date research-based guidelines. However, as we know, teachers do not necessarily follow programs exactly as written. We can take some solace in the evidence that teachers using the very same program will create different learning experiences, and, therefore, possibly different outcomes, perhaps opening up the possibilities for writing (Barrett-Tatum & Dooley, 2015, p. 279).

References

- Applebee, A. N. (2013). Common Core State Standards: The promise and the peril in a national palimpsest. *English Journal*, 103(1), 25-33.
- Applebee, A.N. & Langer, J.A. (2011). A snapshot of writing instruction in middle and high school. *English Journal*, 100(6), 14-27.
- Barrett-Tatum, J. & Dooley, C.M. (2015). From idealized to actualized instruction: Two elementary teachers' enactment of the ELA Common Core State Standards in Instructional Scripts. *Literacy Research and Instruction*, 54(4), 257-284.
- Beach, R. (2011, December). Analyzing how formalist, cognitive-processing, and literacy practices learning paradigms are shaping the implementation of the Common Core State Standards. Paper presented at the annual meeting of the Literacy Research Association. Jacksonville, FL.
- Chambliss, M. J., & Calfee, R. C. (1998). *Textbooks for learning: Nurturing children's minds*. Malden, MA: Blackwell.
- Dewitz, P. & Jones, J. (2012). Using basal readers: From dutiful fidelity to intelligent decision making. *The Reading Teacher*, 66(5), 391-400.
- Dewitz, P., Jones, J., & Leahy, S. (2009). Comprehension strategy instruction in core literacy programs. *Reading Research Quarterly*, 44(2), 102-126.
- Dewitz, P., Leahy, S., Jones, J., & Sullivan, P. M. (2010). The essential guide to selecting and using core literacy programs. Newark, NJ: International Reading Association.
- Durkin, D. (1981). Reading comprehension instruction in five basal reader series. *Reading Research Quarterly*, 16(4), 515-544.
- Education Market Research. (2010). *Elementary reading market: Teaching methods, textbooks/materials used and needed, and market size*. Rockway Park, NY: Author.
- Fitzgerald, J., & Shanahan, T. (2000). Reading and writing relations and their development. *Educational Psychologist*, 35(1), 39-50.
- Gee, J. (1996). *Social Linguistics and Literacies: Ideology in Discourse* (2nd edition). London: Falmer.
- Graham, S., Bollinger, A., Olson, C. B., D'Aoust, C., MacArthur, C., McCutchen, D., & Olinghouse, N. (2012). Teaching Elementary School Students to Be Effective Writers: A Practice Guide. NCEE 2012-4058. *What Works Clearinghouse*.

- Hiebert, E. H. (2009). The (mis) match between texts and students who depend on schools to become literate. In E. H. Hiebert & M. Sailors (Eds.), *Finding the right texts* (pp. 1-20). New York: Guilford.
- Hiebert, E. H., & Brenner, D. (2010). If I follow the teachers' editions, isn't that enough? Analyzing reading volume in six core literacy programs. *The Elementary School Journal*, 110(3), 347-363.
- Hoffman, J.V., Wilson, M.B., Martinez, R.A., Sailors, M. (2011). Content analysis: The past, present, and future. In N.K. Duke and M.H. Mallette (Eds.), *Literacy Research Methodologies*, 2nd ed. (pp. 28-49). NY: Guilford.
- Howard, K. C. (1989). Writing suggestions in basal reading series and the extent teachers follow basal suggestions for writing.
- Ivanič, R. (2004). Discourses of writing and learning to write. *Language and Education*, 18(3), 220-226.
- Jitendra, A. K., Chard, D., Hoppes, M. K., Renouf, K., & Gardill, M. C. (2001). An evaluation of main idea strategy instruction in four commercial reading programs: Implications for students with learning problems. *Reading & Writing Quarterly*, 17(1), 53-73.
- McDonnell, L. M., & Weatherford, M. S. (2013). Evidence use and the Common Core State Standards movement: From problem definition to policy adoption. *American Journal of Education*, 120(1), 1-25.
- McIntyre, E., Powell, R., Coots, K. B., Jones, D., Powers, S., Deeters, F., et al. (2005). Reading instruction in the NCLB era: Teachers' implementation fidelity of early models. *Journal of Educational Research & Policy Studies*, 5(2), 66-102.
- McKeown, M. G., Beck, I. L., & Blake, R. G. K. (2009). Rethinking reading comprehension instruction: A comparison of instruction for strategies and content approaches. *Reading Research Quarterly*, 44(4), 218-253.
- National Governors Association Center for Best Practices (2010). Common Core State Standards. National Governors Association Center for Best Practices, Council of Chief State School Officers, Washington D.C.
- Persching, J.L. (2002). Using document analysis in analyzing and evaluating performance. *Performance Improvement*, 41(1), 36-42.
- Reutzel, D. R., Child, A., Jones, C. D., & Clark, S. K. (2014). Explicit instruction in core literacy programs. *The Elementary School Journal*, 114(3), 406-430.
- Roberts, K. L. (2012). The linguistic demands of the Common Core State Standards for reading and writing informational text in the primary grades. *Seminal Speech Language*, 33, 146-159.
- Williams, J. (1998). Preparing to teach writing: Research, theory, and practice. Hillsdale, NJ: Erlbaum.

APPENDIX

Discourses of Writing Instruction Coding Form

Publisher:

Unit title and grade level	PDF page #	Commentary/description
Common Core writing standard(s) addressed		
Pages about writing/pages per unit		
Skills discourse: correct and accurate use of handwriting, spelling, punctuation, sentence structure		
Creativity discourse: style, content, entertainment value, write from personal experience		
Process discourse: planning, drafting, revision, collaboration, editing		
Genre discourse: informing, describing, persuading, recounting, purpose, context		
Social practices discourse: functional, communicative, simulation of real-life purposes for writing		
Sociopolitical: relations of power inherent in communication		

MORE THAN A DECADE LATER IS RTI WORKING?

Joyce V. W. Warner
Barry University

Priva Fischweicher
Barry University

Lois K. Haid
PepperHill Educational Group

Agnes Shine
Barry University

Abstract

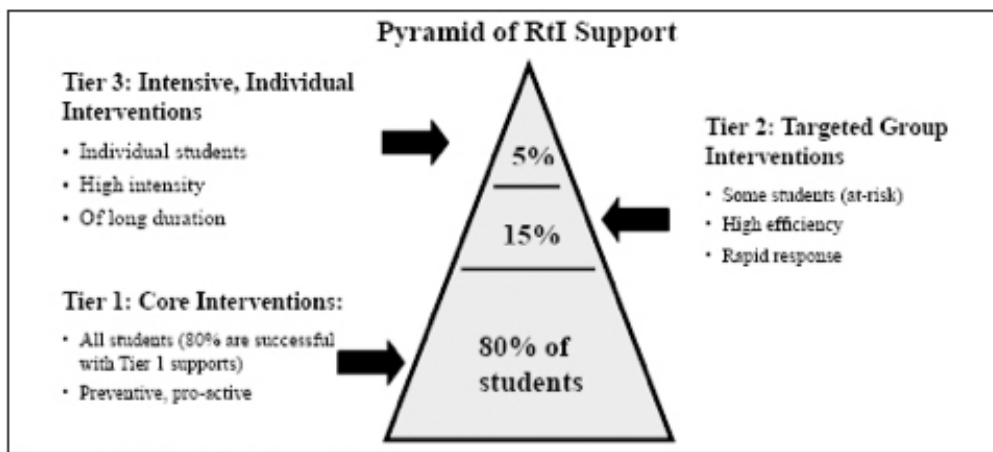
The purpose of this study was to investigate the longitudinal impact of Response to Intervention (RTI) on student reading achievement, as well as its effect on Special Education identification rates for students with specific learning disability (SLD). This longitudinal study was accomplished through a literature review search of pertinent scholarly articles contained in five educational databases. The most notable finding was that after more than a decade of RTI implementation there are very few longitudinal studies that examine the impact on either student reading achievement or Special Education identification rates.

When The Individuals with Disabilities Education Act (IDEA) was reauthorized in 2004, it allowed schools, for the first time, to diagnose Specific Learning Disabilities (SLD) through research-based alternatives rather than the IQ Achievement Discrepancy Model. While specific processes and procedures were not mandated, the Response to Intervention (RTI) model of a Multi-Tiered System of Supports (MTSS) has become the process implemented as the

research-based alternative to the Discrepancy Model (Hauerwas et al., 2013). For example, prior to 2010, Florida used the discrepancy model for the identification of SLD which included assessment data from the School Psychologist and some information based on the student's response to interventions. After 2010, the identification process shifted to one based on the student's response to interventions and no longer relied on data generated solely through a psychological assessment (Rule 6A-6.03018, Florida Administrative Code, 2009).

Typically, the RTI model is seen as a multi-tiered process that is visually presented as a pyramid. Tier 1 (core) consists of high quality whole classroom instruction for all students; Tier 2 (targeted) focuses on at-risk students who require additional time and supplemental support, and Tier 3 (intensive) is often individualized intervention.

In their review of state websites, Hauerwas and colleagues (2013) found that 11 states required implementation of the RTI model and 33 states allowed RTI to be used as a method of diagnosis. The authors noted all 50 states issued regulations on the diagnosis of SLDs and mentioned the RTI model. These data suggest that thousands of students have been impacted by the RTI's multi-tiered process. While research on RTI implementation, process and procedures, and practices is expanding (Bean & Lillenstein, 2012; Ehren, Lipson, & Wixson, 2013; Vaughn et al., 2010), there appears to be a scarcity of studies related to students' outcomes based on longitudinal data (Mellard et al, 2012; Ridgeway et al., 2012). Now, more than a decade since the reauthorization of IDEA with its offer of change, the question of the impact of that change arises. Specifically, since its inception, how has the implementation of the RTI multi-tiered process model impacted literacy achievement and the identification of students with SLD?



Retrieved from http://www.handsandvoices.org/articles/imgs/RtI_graph.gif

Figure 1. Tiered Support.

Our initial study, which laid the ground work for this current review, probed this question by exploring the research on the impact of the RTI Multi-Tiered process on the achievement of striving readers. That study was narrowly focused on reviewing research articles from one scholarly journal and one practitioner journal in the fields of literacy, special education, school psychology, and educational leadership. That investigation yielded a plethora of research addressing RTI procedures and implementation. However, there was a scarcity of studies specifically addressing the impact and efficacy of RTI implementation. This lack of impact studies was even more apparent when the focus of research addressed longitudinal impact. The need to assess the long-term impact in order to gauge the efficacy of the RTI model led to our current extended research study.

The pilot study yielded the importance of exploring a broader range of scholarly journals and search terms hoping to identify an abundance of articles on the longitudinal impact of RTI implementation. Therefore, the format of this current research was to expand the pilot inquiry to explore five educational databases offering scholarly articles from a variety of disciplines that met the search terms and length of study criteria.

Rationale

The rationale for this study was that if RTI is efficacious, over time, there should be an increase in literacy achievement (Gelzheiser et al., 2011; Gilbert et al., 2013; Mellard et al., 2012) as well as fewer students who are misdiagnosed as SLD and in need of special education programs (Vellutino et al., 2006). In addition, these results should not be temporary but manifested over a longer period of time. Findings from our pilot study concluded that the next step for investigation would be: 1) to broaden the focus of the literature content analysis to encompass research from scholarly journals found in educational databases; and 2) to include only longitudinal studies, which we defined as a minimum of one year in length.

The overarching research question of this investigation was: What research has been conducted to measure RTI's longitudinal impact? In order to further define the direction of our research study the following two research questions were developed from the aforementioned question:

- 1) What research has been conducted to measure RTI's longitudinal impact on students identified with reading achievement challenges?
- 2) What research has been conducted to measure RTI's longitudinal impact on the identification of students with Specific Learning Disabilities.

The Study

This research was conducted as a literature review of the longitudinal studies on the impact of RTI implementation. The primary purpose for this type of research methodology is to aid the field (educators and researchers) in accessing the available research on a specific topic (De Los Reyes & Kazdin, 2008). A literature review is conducted by collecting and analyzing existing research, including the study participants, methodology, and results. It prevents reliance on one study that may not be supported by other research (Dunst et al., 2002). Increased calls for using evidence based best practices premised on research findings, support the value of a literature review (Salkind, 2003; Werkmeister & Klein, 2010).

This literature review encompassed RTI research studies published in scholarly articles found in educational databases. Six databases were explored (ERIC, Psych Article, Psych Info, ProQuest Education, Sage Premier, and Taylor and Francis) and they contained a plethora of scholarly articles (Table 1). The databases were assigned to specific researchers. Key search terms used were RTI, Response to Intervention, Multi-Tiered Instruction, and longitudinal and impact studies. The researchers did not limit the search results by specifying where the search terms would be found in the articles.

The researchers focused on the methodology and key findings regarding the long-term impact of RTI on literacy achievement, its long-term impact on students who had been placed in Tier 2 or Tier 3, and its overall impact on the identification rates of SLD and special education enrollment. The researchers defined longitudinal to include any studies that spanned a minimum of one year. Triangulation of the data was accomplished by teams of researchers analyzing the articles from multiple perspectives to establish dependability (Lincoln & Guba, 1985; Patton, 2002). These perspectives were school psychologist, school administrator, reading specialist, and special education. Four researchers in the aforementioned areas initially analyzed the articles. Articles were then cross analyzed by the members of the research team. These multiple perspectives served to triangulate the data. The articles, spanning a variety of disciplines, met the key words and length of study search criteria.

Results

The investigation sought to review the studies' impact rather than to evaluate or identify the pros and cons of the implementation of RTI. Similarly, this investigation did not attempt to identify or critique methodologies implemented during the RTI Multi-Tiered process. In addition, in certain databases the results from the literature search identified articles that were outside the field of

TABLE 1
Database and Keyword Search

Name of Database	RTI	RTI and Impact	Response to Intervention	Response to Intervention and Impact	Multi-Tiered Intervention	Multi-Tiered Intervention and Impact
1. ERIC	343	27	643	50	4	1
2. Proquest Education	863	491	1,238	700	3	2
3. PsychInfo	100	10	485	22	3	1
4. Sage Premier	1,586	12	1,269	16	7	6
5. Taylor & Francis	2	0	33	11	8	4

education and did not address the topic under investigation. Thus, the Psych Articles database was eliminated which leaves five databases used in the study. The results of the initial search of databases provided the number of articles listed in Table 1.

After reviewing the articles identified in each database (listed in Table 1) to determine if they aligned with the specific search criteria, the researchers identified just ten of the 14 articles that met the longitudinal criterion used for the present study. Five of the studies were in the field of literacy, three focused on special education, and two were from other areas of educational research. The Proquest Education database yielded five articles, two of which were also in the Sage Premier database. Five articles were in the Taylor and Francis database. The articles from Eric & PsychInfo did not meet the longitudinal criterion and were discarded.

Proquest Education

Three articles describing research that meet the criteria of this study were found exclusively in the Proquest Education database. The first article, entitled “Effects of a Response-Based, Tiered Framework for Intervening with Struggling Readers in Middle School” addressed the idea that successful intervention takes multiple years (Roberts et al., 2013). These scholars described a three year study with a sample of struggling readers in grades 6-8 (n= 768). They were randomized in to three groups: 1) a response-based, 2) tiered-intervention, or 3) to a “business as usual” group, whose status was maintained over the course of the study. One key question in this study was “What is the effect of a response-based, tier model for delivering reading intervention to struggling student across grades 6-8 on overall reading achievement?” (Roberts et al., p. 240).

Analysis of this data revealed that both the response-based group and the tiered-intervention group of students outperformed the business as usual group of students and also outperformed the group of typical readers (Roberts et al., 2013). The final discussion, while focusing on the efforts that support the sustainability of the RTI model, also maintained that continual intervention over time may have a positive impact on the success of readers who struggle (Roberts et al.).

The second article reported the findings of a longitudinal research study conducted by Stephens, et al. (2012). Approximately 200 students in grades K-5 from one school district participated in this three year mixed methods study. The reading interventionists, those teachers who would provide the Tier 2 instruction, took 27 credits consisting of customized graduate level courses in language and literacy instruction prior to the start of this study.

The students received 30 minutes a day of Tier 2 intervention over a span of three years. The group size for each intervention session was limited to three or four students. The results of this study supported the efficacy of the RTI model based on the following quantitative findings: “. . .for all three years, students made approximately two months growth for every one month of supplemental support [intervention]” (Stephens et al., 2012, p. 102). In addition, this was found to be a consistent pattern across all participating elementary schools (Stephens et al.).

The third study described the results of a 14 week study using a randomized control model to examine the efficacy of the responsiveness of first graders participating in the RTI model (Gilbert et al., 2013). Although the intervention was for a shorter span of time than required, we included this research in our study because post-intervention, the students were followed for an additional two years in order to assess the long-term impact of the RTI based instruction. Gilbert et al.’s research focused on the effect of time and duration of the tutoring experience. The protocol for Tier 3 students was one-to-one tutoring for five days a week. Tier 2 students received small group instruction three days a week.

The significance of this study is noted in the researchers’ discussion of the impact of time, length of intervention period, and the suggestion that RTI intervention may need more time. The key research question of this study was “What proportion of at-risk students. . .achieve[d] reading performance in the normal range. . .?” (Gilbert et al., 2013, p. 139). The authors specifically looked at Tier 1 “non-responders” who were randomly assigned to Tier 2 intervention and Tier 2 “non-responders” who were randomly assigned to remain in Tier 2 or moved to Tier 3. The results indicated that “no differences were detected between the “non-responders” assigned” to Tier 3 and those who remained in Tier 2. The authors

reported that scores of Tier 2 students rose 40% and, of those, 53% were reading “in the normal range by grade 3” (p.135). From these results, the researchers disputed the preventative intent of short term multi-tiered supplemental tutoring that follows standard practice and suggested that the supplemental preventative programs associated with RTI may need to span multiple years to accomplish the preventative intent (Gilbert et al.).

Proquest Education and Sage Premier

As noted previously, two articles appeared in both Proquest Education and Sage Premier. The first article was entitled, “Why Intensive Interventions Matter: Longitudinal Studies of Adolescents With Reading Disabilities and Poor Reading Comprehension” (Solis, Miciak, Vaughn, & Fletcher, 2014). This study addressed the gap in the literature about the use of RTI during the middle school grades. Students with reading disabilities and poor reading comprehension in grades 6-8 were randomized into an intervention or a control group. Those in the intervention group received treatment for 1-3 years in either Tier 1, 2, or 3 (Solis et al.).

Results from year one of the studies focused on Tier 2 intervention for sixth and seventh grade students. Sixth grade students outperformed the control group revealing statistically significant differences in the areas of word reading, word attack, reading fluency, and reading comprehension. Yet, there were few statistically significant improvements for seventh grade participants (Solis et al., 2014). Year two findings addressed Tier 3 interventions for students who had not demonstrated adequate progress in Tier 2 the previous year. Participants in both the standard and individualized treatment protocol showed statistically significant differences in word reading, word attack, and word reading fluency, and spelling when compared to the control group. Yet, when comparing students in the standard and individualized treatment protocol, the results were not statistically significant (Solis et al.)

The effects of long-term RTI intervention for eighth grade students, who showed inadequate progress in years two and three of Tier 3 placement, were addressed in year three. With the continuation of Tier 3 for a second year, students attained significantly higher test scores in reading comprehension and word attack than participants in the control group (Solis et al., 2014). It is important to note that this finding was impacted by the downward trend of scores attained by the control group compared to the fairly steady scores achieved by the intervention group. This downward trend was evidenced by the scores of students who did not receive intervention scaffolding, while the scores of students who did receive interventions increased (Solis et al.).

The second article entitled, “Use of Evidence-Based, Small-Group Reading Instruction for English Language Learners in Elementary Grades: Secondary-Tier Intervention” (Kamps et al., 2007) was a five year longitudinal impact study using an experimental/comparison group model. The researchers looked at Tier 2 intervention for English Language Learners (ELL) at the elementary level. The participants (n = 318) consisted of 170 ELL students and 148 English-only students in grades one and two at six elementary schools. The intervention groups received Tier 2 instruction in small groups consisting of 3-6 students Kamps et al.

The results of this study showed Tier 2 reading interventions to be highly effective vis-à-vis early literacy skill acquisition for first and second grade ELL students. Another important finding of the study indicated that ELL students showed similar benefits from early literacy interventions when compared to English-only students. The final conclusions drawn by the authors indicated that although some first grade students were able to transition to Tier 1 and maintain acceptable benchmarks, a number of first and second grade participants required Tier 2 intervention for an extended period of time (Kamps et al., 2007).

Taylor and Francis

The researchers found in the Taylor and Francis database a total of five scholarly journal articles that addressed the long-term impact of RTI. The first article, “Special Education in a 4-Year Response to Intervention (RTI) Environment: Characteristics of Students with Learning Disability and Grade of Identification” (O’Connor, Bocain, & Flynn, 2013), focused on the learning disability (LD) determination of students in grades 1-4 who received a Tier 2 reading intervention. The study employed a treatment-control model comprised of two cohorts of students from five elementary schools across two school districts. In year one of the study, cohorts were identified by grade level and consisted of the following: Cohort One (n = 381) were first grade students and Cohort Two (n = 377) were in second grade. Cohort One, the treatment group, received RTI instruction while Cohort Two, the control group did not participate in RTI. Over a span of four years, the authors compared the proportion of special education placement for students in Cohort One and Cohort Two (O’Connor et al.).

Students in Cohort One, who were labeled LD and received Tier 2 reading interventions, demonstrated relatively greater reading impairment when compared to the same students prior to RTI implementation (O’Connor et al., 2013). Students whose poor reading skills were successfully remediated through Tier 2 intervention were not referred for special education evaluation or placement,

leaving only those students with very difficult-to-remediate reading skills in the LD pool. Thus, it was concluded that using an RTI intervention model helped school personnel identify those students with reading difficulties that could not be improved through Tier 2 intervention (O'Connor et al.).

The second article, "Tracing Student Responsiveness to Intervention with Early Literacy Skills Indicators: Do They Reflect Growth toward Text Reading Outcomes?" (Clemens et al., 2012) followed 201 kindergarten students through first grade in three elementary schools. Though this study focused on the use of DIBELS subtests as a determinant of RTI placement and is parenthetical to our research questions, it was included in the review as it met the longitudinal criteria. The study's purpose was to determine if four widely-used early literacy skills indicators were efficacious in reflecting growth toward first-grade text reading skills and thus helping to determine RTI tier placement. The measurement instruments, for determining early intervention, consisted of the following subtests: Initial Sounds Fluency (ISF), Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF), and Nonsense Word Fluency (NWF) (Clemens et al.)

Results from this study revealed that for these kindergarten students, the LNF and NWF were more accurate than the ISF and PSF in terms of determining which students would score above or below the 30th percentile on the Oral Reading Fluency (ORF) at the end of first grade, (Clemens et al., 2012). One caveat mentioned by the authors, suggested possible problems vis-à-vis the identification of students with persistently low achievement scores. The results of this study suggest the need for continued refinement of early literacy skills measures so as to aid in correct tier placement of students when using the RTI model (Clemens et al.).

A third article entitled, "One Elementary School's Implementation of Response to Intervention," addressed the implementation over one year of a three-tiered RTI model at one elementary school (Lambke et al., 2010). The ideal result of an effective RTI model should have 80% of students in Tier 1, 15% in Tier 2, and 5% in Tier 3. The school noted that their students were disproportionately testing into Tier 2 and Tier 3 interventions for literacy with 26% in Tier 2, 44% in Tier 3, and only 30% in Tier 1 (Lambke et al, p. 367). Based on this data, school personnel made a decision to implement a new core reading program and a revised RTI intervention model in order to improve students' reading test scores. The purpose of this study was to evaluate the effect of this new model over a two year period. The impact of this longitudinal study indicated that the percentage of students testing into Tier 1 increased from a low of 30% to 44% (Lambke et al., p. 367).

Over the course of the study, when reviewing the data from Tier 2, the researchers observed a slight increase in the percentage of students in that tier (26% to 27%). Importantly, far fewer students moved to Tier 3, decreasing from 44% to 31%. The data indicated that the percentage of students at Tier 1 and Tier 3 had reversed (Lambke et al., 2010, p. 369).

The fourth journal article was “Immediate and Long term Effects of Tier 2 Reading Instruction for First Grade Students with High Probability of Reading Failure” (Case et al., 2014). Results from a battery of screening assessments identified students with a “high probability of reading failure” (p. 34). These first grade participants (n = 123) were randomly placed in either an intervention group (n = 61) or a control group (n=62) (Case et al.). During the second half of first grade, the intervention group received, over a 12 week period, 25 sessions totaling 17 hours of Tier 2 instruction. The sessions consisted of early literacy lessons. To determine the impact of the Tier 2 intervention, both groups were post tested at the conclusion of the 25 sessions in first grade and again 12 months later at the end of second grade (Case et al.).

Results from the first posttest identified students in the intervention group as responders or non-responders (to intervention). The results of the second posttest, at the conclusion of second grade, indicated there was no significant difference between the groups. Thus at the conclusion of second grade there was no significant difference between the scores of intervention and control groups. However, the students in the intervention group, identified as responders at the first posttest, continued to show higher reading outcomes than those labeled as non-responders (Case et al., 2014).

The fifth article was “Long-Term Effects of First-Grade Multitier Intervention (Otaiba et al., 2014). The study tracked students for three years, beginning when they were in the first grade. At the onset of the investigation first grade students (n = 419) were placed in one of two RTI models: 1) the “typical condition” model or 2) the “dynamic condition model” (Otaiba et al., p. 254). All students in the typical condition model began in Tier 1 and were only moved to higher tiers if, during the first eight weeks or at subsequent screenings, sufficient reading progress had not been made. This contrasts with the dynamic condition model where students were immediately placed in one of the three tiers based on their initial screening. Students’ tier placement was adjusted as needed based on subsequent screenings (Otaiba et al.).

At the end of first grade students were coded into one of three groups: 1) NR, not at risk, (n = 262) for students who remained in Tier 1 for the entire school year; 2) ER, easy to remediate, (n = 31) those who were placed in higher tiers and responded to interventions that allowed them to move down in tiers;

3) SR, sustained remediation, students who either remained in Tier 2 or moved to Tier 3 (Otaiba et al., 2014). One of the objectives of the investigation was to compare students in each of the three groups over multiple years to determine if there was a difference in outcomes based on the two RTI models. At the beginning of first grade, reading scores for the ER and SR group were in the low range, but comparable between groups. At the end of both second and third grade, the SR group measured significantly lower on the reading measures than students coded NR and ER. One key implication discussed by the authors was the need for sustained interventions for striving readers (Otaiba et al.).

Discussion

In keeping with the search criteria of “longitudinal impact studies,” it is noteworthy that across the ten identified studies for our literature review comparable aspects are seen in both methodology and grade level of participants. Five of the ten studies reported employed a control and experimental research design (Case et al., 2013; Kamps et al., 2007; O’Connor et al., 2013; Roberts et al., 2013). Two of these studies, Case et al. (2013) and Roberts et al. (2013), randomized study participants into control and experimental groups.

The Case et al. (2013), Gilbert et al., (2013) and Otaiba et al. (2014) studies relied on a short term intervention in the first grade, tracked those students, and then reported on their achievement at the end of either second or third grade. These three studies referred to students who did not respond to RTI intervention as “non-responders.” Of the ten studies included in our research, two studies involved middle school students and both spanned a three year timeframe (Roberts et al., 2013; Solis et al. 2014). Eight studies were conducted with elementary students. One concern with the studies targeting elementary school students was the specific focus on word learning, decoding, and other aspects of word manipulation and structural analysis, with little exploration of reading comprehension achievement.

Perhaps, the most interesting finding in this investigative research is the lack of longitudinal data on the impact of the RTI intervention process on students who were in either Tier 2 or Tier 3 (see Table 1). The small number of studies that provided the longitudinal impact of RTI suggested that students with low reading achievement may benefit from continued interventions. However, little if any data exists that suggest that providing interventions over time (more than a year) improves reading achievement. For example, after providing longitudinal intervention to poor readers in 8th grade,; Solis et al., 2014 suggested that 8th grade students would need an additional four years of intensive interventions to bridge the reading achievement gap between poor and adequate readers.

The few studies located suggested that students may benefit from longer term intervention. However there is little data to support this hypothesis. The impact of RTI on the rate of student placement in special education services was noted in only two studies (Lambke et al., 2010; O'Connor et al., 2013). A 30% drop in special education placement was noted by Lambke et al. (2010), while O'Connor (2013) found a reduction in the number of English Language Learners identified for special education.

Nonetheless, the scarcity of long-term studies is a surprising result when considering that the RTI model and its multi-tiered system of supports has been so widely implemented in the majority of states over the past decade (Hauerwas et al., 2013). While there have been many articles written about how to implement RTI, as well as the short term effects of the RTI model (e.g. Allen et al. 2012; Bean & Lillenstein, 2012; Catts et al., 2009; Johnston, 2011) our investigation suggests a lack of research and/or evaluation of the longitudinal impact of the RTI model. This should be a concern to researchers and educators alike. While it is important to acknowledge that studies documenting the short-term impact of RTI interventions add to the larger body of knowledge, it is equally important to know the impact of interventions that span multiple years as suggested by Case et al. (2014), Gilbert et al. (2013), and Otaiba et al. (2014). Studies that investigate whether short-term gains are maintained across multiple school years are another area of research that requires additional investigation to allow for results to be generalized to a larger population.

It is difficult to speculate why more research on the long-term impact of multi-tiered intervention has not been conducted. One possible hypothesis is keeping track of those students who have received interventions over time is an ungainly task, due in part to the transient nature of a student population. Academic records do not always follow students nor is information pertinent to the topic under review, or placed in students' permanent records with consistency. While students are tracked when they are in special education, there does not appear to be a system, in place, to track students who receive MTSS. This makes it difficult to follow each student's progress over multiple years. No matter the reason, it is important that researchers and educators find ways to address the issue of longitudinal impact of RTI intervention to ensure that students are given every opportunity to thrive after engaging with the multi-tiered system of supports.

Further Research

This study appears to suggest that implementation of the multi-tiered RTI model has resulted in 1) increased student achievement in the area of literacy (Kamps

et al., 2007; Roberts et al., 2013; Solis et. al., 2014) and 2) fewer students being referred to special education services (Lamke et al., 2010; O'Connor et al., 2013). It is incumbent upon educators and researchers to identify the next steps to build a body of knowledge that addresses the two research questions upon which this study was constructed.

The need for additional comprehensive studies that address both the long-term impact of the RTI intervention process, specifically in the identification of students with reading challenges, as well as its effect on the identification of students with Specific Learning Disabilities is imperative. This is underscored by other scholars (e.g. Otaiba et al., 2014) and is potentially more important as we enter the second decade of RTI implementation without an understanding of its long-term impact and without this research to support its continued use.

References

- Allen, J., Alexander, R., & Stern, A. (2012). Response to Intervention in middle schools: Practices and outcomes. *Learning Disabilities Research & Practice, 27*(3), 136-147.
- Bean, R., & Lillenstein, J. (2012). Response to Intervention and the changing roles of schoolwide personnel. *Reading Teacher, 65*(7), 491-501.
- Case, L., Speece, D., Silverman, R., Scharschneider, C., Montanaro, E., & Ritchey, K. (2014). Immediate and long term effects of tier 2 reading instruction for first grade students with high probably of reading failure. *Journal of Research on Educational Effectiveness 7*(1) 28-53.
- Catts, H. W., Petscher, Y., Schatschneider, C., Bridges, M. S., & Mendoza, B. (2009). Floor Effects Associated with Universal Screening and Their Impact on the Early Identification of Reading Disabilities. *Journal of Learning Disabilities, 42*(2), 163-176.
- Clemens, N. H., Hilt-Panahon, A., Shapiro, E. S., & Yoon, M. (2012). Tracing student responsiveness to intervention with early literacy skills indicators: do they reflect growth toward text reading outcomes? *Reading Psychology, 33*(1-2), 47-77.
- De Los Reyes, A., & Kazdin, A. E. (2008). When the evidence says, "Yes, no, and maybe so": Attending to and interpreting inconsistent findings among evidence-based interventions. *Current Directions in Psychological Science, 17*(1), 47-51.
- Dunst, C. J., Trivette, C. M., & Cutspec, P. A. (2002). Toward an operational definition of evidence-based practices. *Centerscope, 1*(1), 1-10.
- Ehren, B. J., Lipson, M. Y., & Wixson, K. K. (2013). Expanding pockets of excellence in RTI. *Reading Teacher, 66*(6), 449-453.
- Gelzheiser, M., Scanlon, D., Vellutino, F., Hallgren-Flynn, L., & Schatschneider, C. (2011). Effects of the interactive strategies approach-extended: A responsive and comprehensive intervention for intermediate-grade struggling readers. *Elementary School Journal, 112*(2), 280-306.

- Gilbert, J. K., Compton, D. L., Fuchs, D., Fuchs, L. S., Bouton, B., Barquero, L. A., & Cho, E. (2013). Efficacy of a first-grade Responsiveness-to-Intervention prevention model for struggling readers. *Reading Research Quarterly, 48*(2), 135-154.
- Graves, A. W., Brandon, R., Duesbery, L., McIntosh, A., & Pyle, N. B. (2011). The effects of Tier 2 literacy instruction in sixth grade: Toward the development of a Response-to-Intervention model in middle school. *Learning Disability Quarterly, 34*(1), 73-86.
- Hauerwas, L. B., Brown, R., & Scott, A. N. (2013). Specific learning disability and response to intervention: State-level guidance. *Exceptional Children, 80*(1), 101-120.
- Individuals with Disabilities Education Improvement Act, H.R. 1350, 108th Congress. (2004).
- Johnston, P. (2011). Response to Intervention in literacy: Problems and possibilities. *The Elementary School Journal, 111*(4), 511-534.
- Kamps, D., Abbott, M., Greenwood, C., Arreaga-Mayer, C., Wills, H., Longstaff, J., Culpepper, M., & Walton, C. (Summer, 2007). Use of evidence-based, small-group reading instruction for English language learners in elementary grades: Secondary-tier intervention. *Learning Disability Quarterly, 30*, 153-168.
- Lambke, E., Garman, C., Deno, S. L., & Stecker, P. M. (2010). One elementary school's implementation of response to intervention (RTI). *Reading and Writing Quarterly, 26*(4), 361-373.
- Lincoln, Y. & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Mellard, D., Frey, Bruce, B., & Woods, K. (2012). School-wide student outcomes of Response to Intervention frameworks. *Learning Disabilities: A Contemporary Journal, 10*(2), 17-32.
- O'Connor, R., Bocain, K., & Flynn, L. (2013). Special education in a 4-year response to intervention (RTI) environment: Characteristics of students with learning disability and grade of identification. *Learning Disabilities Research and Practice, 28*(3), 98-112.
- Otaiba, S., Kim, Y., Wanzek, J., Petscher, Y., & Wagner, R. (2014). Long-term effects of first-grade multitier intervention. *Journal of Research of Educational Effectiveness, 7*(3), 250-267.
- Patton, M. (2002). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Ridgeway, T., Price, D., Simpson, C., & Rose, C (2012). Reviewing the roots of response to intervention: Is there enough research to support the promise? *Administrative Issues Journals: Education, Practice, and Research, 2*(1). 83-95.
- Roberts, G., Vaughn, S., Fletcher, J., Stuebing, K., & Barth, A. (2013). Effects of a response-based, tiered framework for intervening with struggling readers in middle school. *Reading Research Quarterly, 48*(3). 237-254.
- Rule 6A-6.03018 (2009). Florida Administrative Code, exceptional education eligibility for students with specific learning disability. Retrieved from <https://www.flrules.org/gateway/RuleNo.asp?id=6A-6.03018>

- Salkind, N. (2003). *Exploring research* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Solis, M., Miciak, J., Vaughn, S., & Fletcher, J. (2014). Why intensive interventions matter: Longitudinal studies of adolescents with reading disabilities and poor reading comprehension. *Learning Disabilities Quarterly*, 37(4), 218-229.
- Stephens, D., Cox, R., Downs, A., Goforth, J., Jaeger, L., Matheny, A., . . . Wilcox, C. (2012). "I know there ain't no pigs with wigs": Challenges of tier 2 intervention. *The Reading Teacher*, 66(2), 93-103.
- Vaughn, S., Cirino, P., Wanzek, J., Wexler, J., Fletcher, J., Denton, C., Barth, A., . . . & Francis, D. (2010). Response to intervention for middle school students with reading difficulties: Effects of a primary and secondary intervention. *School Psychology Review*, (39)1, 3-21.
- Vellutino, F., Scanlon, D., Small, S., & Fanuele, D. (2006). Response to Intervention as a vehicle for distinguishing between children with and without reading disabilities: Evidence for the role of kindergarten and first-grade interventions. *Journal of Learning Disabilities*, 39(2), 157-169.
- Werkmeister R., & Klein W. (2010). The value and purpose of the traditional qualitative literature review. *Journal of Evidence-Based Social Work*, 7(5), 387-399.

APPENDIX 1

Field	Study	Duration	Grade of Participants	Findings
Literacy	Clemens et al., (2012)	2 years	K through first grade (n = 101)	the need for continued refinement of early literacy skills measures so as to aid in correct tier placement of students
	Gilbert et al., (2013)	1 year	First grade (n = 212)	“...no differences were detected between [those] assigned” to Tier 3 and those [remaining in Tier 2. Though the scores of Tier 2 students rose 40% and, of those, 53% were reading “in the normal range by grade 3” p.135).
	Lambke et al., (2010)	3 years	Pre-K through fifth grade (n = 290)	increase in students testing into Tier 1; decrease in those testing into Tier 3
	Roberts et al., (2013)	3 years	Sixth through eighth grade (n = 768)	intervention students outperformed “business as usual” students and the group of “typical readers” (p. 137).
	Stephens, et al., (2012)	3 years	K through fifth grade (n = 200)	“for all three years, students made approximately two months growth for every one month of supplemental support [intervention]” (p. 102).
Special Education	Kamps et al., (2007)	5 years	First and second grade (n = 318)	Most first and second grade participants required Tier 2 intervention for an extended period of time.

Field	Study	Duration	Grade of Participants	Findings
	O'Connor et al., (2013)	4 years	First through fourth grade (n = 758)	The RTI model helped identify students with persistent reading difficulties that could not be improved with Tier 2 intervention.
	Solis et al., (2014)	3 years	Sixth through eighth grade (n = 1,083)	Students attained significantly higher test scores in reading comprehension and word attack than participants in the control group.
Educational Research	Case et al., (2013)	2 years	First through second grade (n = 123)	Although there was no significant difference between the groups at the end of two years, students identified as responders at the first posttest continued to show higher reading outcomes than those labeled as non-responders.
	Otaiba et al., (2014)	3 years	First through third grade (n = 419)	Students labeled non-responders performed higher across all three years of the study than other students in the study.

AN INVESTIGATION OF ADULTS WHO STRUGGLED WITH READING AS CHILDREN AND HOW THEY WERE IMPACTED BY THEATRE AND DRAMA ACTIVITIES

James Nageldinger
Elmira College

Abstract

One hundred and sixty-eight theatre majors from five universities completed a survey on experiences with reading and school theatre activities. The survey results generated a case study sample of four participants for in-depth interviews to explain and expand the survey findings. Results indicated that theatre/drama activities have a definite perceived impact on reading skills for struggling readers. Implications include the reassessment of curricular priorities by curriculum stakeholders and the potential for K-12 teachers to offer theatre-based approaches to students who struggle with reading.

The connection between theatre activities such as play production that involve reading scripts and reading comprehension has a sound theoretical basis. A half-century ago, Rosenblatt (1938/1968) suggested, “When we are helping students to better techniques of reading through greater sensitivity to diction, tone, structure, image, symbol, narrative movement, we are helping them to make more refined responses that are ultimately the source of human understanding and sensitivity to human values” (p. 290). More recently, Stayter and Allington (1991) found that reading scripts leading to performance helps students to “examine the texts for clues to the voice, diction, and intonation as well as the motives and attitudes of the characters and authors” (p. 147). Additionally, Rose and colleagues (2000) demonstrated that “a drama-based reading program

emphasizing imagery, elaboration, and story element segmentation can have a dramatic impact on student learning in the area of reading comprehension” (p.63). Thinking skills associated with reading comprehension such as generating, clarifying, sequencing, inferring, and analyzing are called into practice during a theatre activity (McMaster, 1998). Additionally Beyda (2003) asserted, “Theatre [activity] allows students to take in new information through many sensory channels, such as auditory, kinesthetic, and visual, increasing the likelihood that information will be remembered and stored in long-term memory” (p. 66).

Theoretical Framework

LaBerge and Samuels’ *Theory of Automaticity* (1974) suggests that humans develop a kind of unconscious competence for knowing how to perform a task at a competent level. The repeated reading of scripts and other materials practiced to improve one’s oral interpretation of text strengthens this kind of competence by allowing the cognitive resources ordinarily directed at foundational skills such as decoding to be directed at higher-order comprehension skills. Significantly, Samuels (1979) found that one’s fluency improved not only on the practiced text but the competency extended to new, more difficult text as well.

An essential part of theatre production is expressive oral reading, or prosody. Recent research has shown that students who read with greater prosody in oral reading tended to have higher levels of comprehension when reading silently (e.g. Benjamin & Schwanenflugel, 2010; Rasinski, Rikli, & Johnston, 2009). Competence at prosody comes in large part from practicing one’s lines. Student actors and performers read their parts innumerable times to gain meaning practicing various phrasing, accent, and inflections while collaterally improving their fluency (Kuhn & Stahl, 2003) and in turn their silent reading comprehension (e.g. Benjamin & Schwanenflugel, 2010; Klauda & Guthrie, 2008). Struggling readers at all levels benefit from opportunities to read repeatedly with proper expression (e.g. Dowhower, 1987; Rasinski et al, 2009; Samuels, 1979).

Research Questions

While there is reason to believe that struggling readers benefit from involvement in K-12 theatre programs, little has been written that specifically addresses this belief. It is presumed that repeated reading of scripts is an important factor, but there had been no research that explored this belief from the students’ perspective. The research questions therefore were:

1. Did theatre/drama activities have an influence on struggling readers?
2. What theatre/drama activities were perceived to have the most positive influence on struggling readers?
3. In retrospect, how did involvement in theatre/drama activities influence struggling readers' perceptions of reading performance?
4. How did teacher/peer interactions with students who participate in theatre and drama activities perceived to influence students' reading?

Methods

The research methods for this research project was a sequential mixed methods design. A survey using scaled and open-ended questions were collected followed by interview questions to a selected few.

Participants

Participants were one hundred and sixty-eight purposefully selected theatre majors from five universities in the upper mid-west. Theatre majors were specifically chosen because of the likelihood of having K-12 theatre experiences. The survey was completed by 107 (64%) women and 61(36%) men. Even though the majority 109(65%) self-identified as middle class, 32(19%) self-identified as lower middle class, 22(13%) considered themselves being privileged and 5(3%) self-identified themselves as having grown up at the poverty level. The ethnicity included 141(84%) Caucasian, 12(7%) African American, 8(5%) Asian/Pacific, 5(3%) Hispanic and 2(1%) Other.

Instruments

The first phase used an online survey created by the researcher that included 28 likert-scaled (1-4) and 16 open-ended questions. The second phase was the interview which used structured questions created from the analysis of the open-ended survey questions as well as follow-up questions for clarification.

Results

Data analysis showed that 44 (26%) participants struggled as K-12 readers. The open-ended survey question responses from these 44 participants as well as the interview data from four interviewed participants were analyzed using the constructivist grounded theory approach looking for patterns and trends

(Charmaz, 2006). The results will be talked about as each research question is answered below.

Research Question 1

This research question asked *IF theatre/drama activities have an influence on struggling readers*. Data from the surveys of the 44 struggling reader participants were used. Survey Item 10, asked if any of the following theatre activities influenced their reading by indicating either YES or NO: Acting, Directing, Design/Tech, Movement, Performing, Playwriting, or Reading Scripts. Of the seven activities listed, all participants thought at least one area had a positive influence and the average number of activities named per participant was 3.75. This suggests that theatre/drama activities did have an influence of struggling readers.

Research Question 2

This research question asked *WHAT theatre/drama activities were perceived to have the most positive influence on struggling readers?* Data from the surveys of the 44 struggling reader participants were used. As seen in Figure 1 below, from the seven choices of theater/drama activities listed participants indicated that four of the activities were the most helpful: reading scripts, acting, performing, and directing.

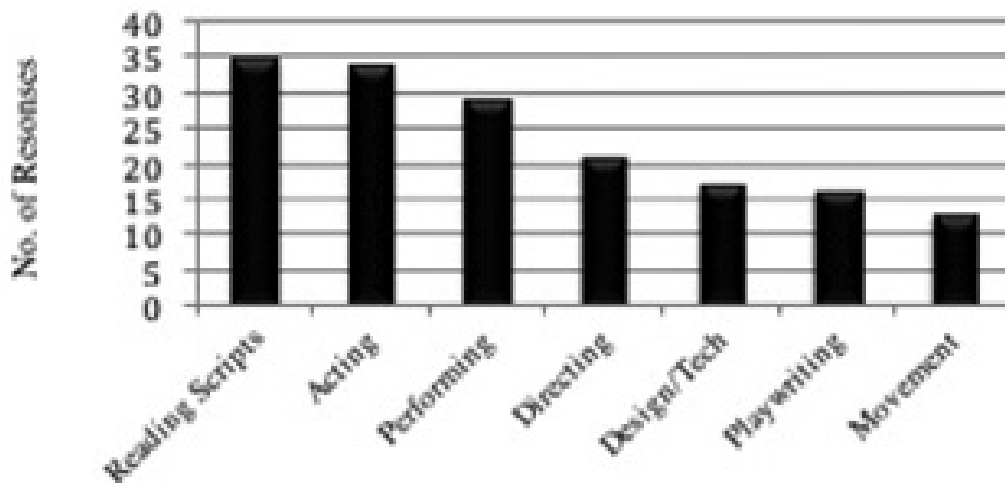


Figure 1. Theatre activities perceived to have a positive impact on struggling readers.

Research Question 3

This research question asked participants in *retrospect*, *HOW did involvement in theatre/drama activities influence struggling readers' perceptions of reading performance?* A variety of survey items were examined and as seen in the three tables below, it was determined that overall, struggling readers' believed that acting provided the most time for rereading text and that this reading was very beneficial in helping them complete several strategies that aided in comprehension of text.

First, SI18 asked participants which of the five listed activities which normally involve reading to estimate how many times a script was reread. Even though participants were all engaged in more than one activity, acting was identified as the activity in which a script was reread the most number of times (Table 1).

Second, 7 items (SI 11-17), which were open-ended questions were used to determine how participants felt their reading was influenced by the seven theatre activities listed below. As seen in Table 2, their comments generated 13 ways they felt theatre activities positively impacted their reading. Initial coding revealed that acting followed by directing appears to have provided the most benefits in building reading skills and strategies. Comprehension, close reading, and perspective emerged as the predominant impacts on reading.

Third, Table 3 looks at the coding of SI 36 which was an open-ended question and asked participants to generalize, *how getting involved in theatre/drama influenced their feeling about reading?* Thirty-seven of the 44 students responded briefly to the question. Responses varied in length and sometimes were coded with two or more categories. For example, "I read a lot more after I got involved because it showed me how to make something I read come to life, visually or by performance. I hated reading as a kid, but once I got involved with theater, I loved it" (Participant 36) was coded as Wide Reading, Engagement, and Visualization. Engagement was seen as the primary influence. However, there

TABLE 1
Script Reading Frequency by Theatre Activity

Activity	1-10	10-50	50-100	100+	10 or More Readings
Acting	13	16	4	2	22
Directing	10	7	1	4	12
Playwriting	8	4	3	2	9
Design/Tech	21	7	1	0	8
Moving/choreography	16	4	2	1	7

TABLE 2
Emerging Category Frequency by Theatre Activity

	Acting	Directing	Design/ Tech	Moving	Performing	Playwriting	Scripts	
<u>Category</u>								<u>Total</u>
Comprehension	6	5	3	2	2	0	0	18
Close Reading	5	3	0	0	2	0	3	13
Perspective	4	3	1	0	1	0	1	10
Social	2	3	0	0	2	0	1	8
Inference	3	0	0	0	1	0	1	5
Visualization	0	0	0	2	0	1	2	5
Engagement	2	0	0	0	0	1	1	4
More reading	0	0	2	0	0	0	1	3
Prosody	1	0	2	0	0	0	0	3
Fluency	1	0	1	0	0	0	0	2
Repeat Reading	0	1	0	0	1	0	0	2
Word Knowledge	2	0	0	0	0	0	0	2
Multimodal	1	0	0	0	0	0	0	1
Total	27	15	9	4	9	2	10	

were a few that felt theatre activities had little or no impact on their feelings toward reading.

Fourth, SI 20-23 asked how else theatre/drama participation influenced their reading and to provide specific examples. Categories that emerged indicated strategies of close reading, perspective, and wide reading followed closely by attending to overall comprehension and repeated reading.

TABLE 3
Student's Belief about How Involvement in Theatre/Drama Impacted their Feelings about Reading

Impact	Number of Incidences per Category
Engagement (willing)	12
Wide Reading	7
Little or No Impact	6
Visualization	5
Comprehension	4
Perspective	3

Research Question 4

The question asked *participants how they believed teacher/peer interactions in theatre/drama activities influenced their reading*. Survey items 11-17 were examined and using comments like those below, it was determined that overall, struggling readers' believed engagement, wide reading, close reading, and comprehension were the major influences of theatre/drama on reading through peer and teacher interaction. Additionally, several comments showed that theatre/drama activities often led to greater depths of understanding that transferred to other texts.

- “It [acting] helps me to read on a more analytical level. We have to analyze what we think characters in plays are trying to get across by thoroughly looking at their word choice. This causes me to do the same when I read” (Participant 135, SI 11).
- “I had to challenge myself to read more carefully in order to properly understand where the other writer was coming from and to offer constructive criticism in regards to improvement and clear understanding” (Participant 71, SI 16).
- “Being in plays made me enjoy reading a lot more because it motivated me to read the scripts of the plays I was in which slowly helped me as a reader in general and so then I started enjoying reading regular books more often” (Participant 20, SI 36).
- “Every time I pick up a book it seems as if I am stepping into a performance that's created by the words on the page. It's a vivid world that is so exciting and life like that makes me excited to keep reading” (Participant 141, SI 36).
- “When reading a script or trying to put emotions into the characters, it helps to fully understand the script you are reading, meaning you have to go over it a dozen times and understand all parts of the script” (Participant 138–SI 11).
- “When reading a novel or a play, I used to simply read the words at face value. After experience in the theatre I have become more acutely aware of subtext, foreshadowing, and double meanings” (Participant 61–SI 36).

Case Studies

Four struggling readers agreed to be interviewed. Below provide small portraits of their perceptions of theater/dram activities and reading. All participants are identified by pseudonyms.

Nate Nate is a 21-year-old majoring in directing. He grew up in a middle class household, the son of a theatre lighting designer and stage manager. He described himself as someone who doesn't like to read, but when he does, reads well with expression, has no trouble figuring out new words and occasionally struggles with silent reading comprehension (SI 7). Nate was a reluctant reader who was held back in the first grade in part due to reading difficulties. Exposed to theatre at an early age, he had an initial interest in technical theatre that later transitioned into directing. Theatre activities, especially directing, impacted the way he read theatre/drama texts. Although he believes involvement in theatre had a significant impact on his self-esteem, he doesn't believe theatre impacted how he read in content areas and may or may not have attributed to his overall academic success. Close reading and visualization were major themes in Nate's relationship to theatre and reading. "When directing you have to analyze script which means that you must have a full understanding of the text backwards and forwards to be able to have a concept for the play" (Interview). Furthermore for Nate, directing a play involved visualization. "Reading a script when you're directing . . . it's like drawing a picture where you're just creating it from what's in your head." Whereas in the survey results close reading was a much more dominant theme than visualization, in Nate's interview the two themes occur with nearly equal weight. Additionally, Nate felt it necessary to read between the lines in order to grasp the nuances of a script which not only gave him new ways of looking at other texts but helped him to see different motives of the character as well as different characteristics that enhance in your performance and extend your understanding of the script.

David David is a 25-year-old technical theatre major and former IT graduate who is pursuing a second degree. He grew up in a lower middle class rural environment and said he does not enjoy reading, but understands most of what he reads silently. He was a Title 1 student whose early intervention for comprehension problems did not involve any fluency activities. He reads slowly without good expression and when he does not understand what he reads, he reads on hoping it will make sense later (SI 6, 7). His theatre experience began as a church-based extracurricular experience during high school. Theatre impact on David's reading occurred mostly since leaving high school and revolved mostly around technical theatre and some acting. Design/Technical theatre, and to a lesser extent acting, put him in situations that necessitated close reading which supports one of the major themes of the survey. He said when preparing a technical design for a play, "I have to read through the scripts a couple times in order to get a gist of the settings and stuff of that nature and then usually, in italics within the script, you'll see that they have the setting details, sound details, anything

the author wants to throw in as far as an intuition into the, or an idea into what they perceive” (Interview).

Carrie Carrie is a 25-year-old female who grew up in a privileged household. She was a technical theatre major. She enjoys reading and described herself as someone who reads slowly, has trouble figuring out new words, doesn't read well with expression, and occasionally struggles with comprehension (SI 7). As a child she did not visualize and struggled with comprehension, vocabulary, and reading prosody. She was diagnosed with ADD and often felt under the gun to keep up with her peers. She had to be taught to slow down and read for meaning and with expression. Carrie got involved in theatre in her junior year of high school. She reinforced her comprehension skills by reading scripts closely and increased her fluency through multiple readings of scripts. Her involvement in theatre helped her see the world through a different lens and helped her gain meaning when reading in content areas, particularly social studies. Her prevailing themes of close reading, engagement, and inference corroborate the survey findings. After getting involved with theatre, “I would always try and read it [text] as what does that person want? Like, what's their end goal in why they're behaving the way they are?” And, “I could actually contribute to [other] discussions we were having in class. . . I remember talking and somebody being like ‘*Yeah, you get it!*’” (Interview). The theme of the transfer of skills to other reading is particular to Carrie. “I definitely think now, even reading, learning how to pull apart scripts now has been incredibly helpful and reading other things” (Interview).

Kyle Kyle is a 19-year-old male student who is majoring in acting. He grew up in a middle class family had an outgoing personality, and enjoyed entertaining his large family. Kyle was a reluctant reader, diagnosed with ADD in middle school, and continues to dislike reading. Introduction to acting in high school increased engagement and the amount of reading of theatre scripts. Although his reading improved during his high school years, he still occasionally struggles with comprehension. He reads silently slowly, reads out loud well with expression, and has some trouble figuring out new words (SI 7). Kyle credits theatre for making him a better reader of scripts but doesn't feel it affected his overall reading in other areas. Themes that emerged from Kyle's interview were multiple readings and the positive impact of prosody on comprehension of scripts. When working on a character in straight (non-musical) plays, he said, “I read those scenes probably six or seven times before I even started working on them” (Interview). Reading with appropriate expression became important: “Whenever I read scripts, I never just read them anymore. I like to read them with another person, or just do all of the voices by myself. . . I have to perform

when I read to understand fully what is happening in the script.” Unlike the survey results, engagement and the impact of theatre activities on comprehension were not prevalent in Kyle’s interview.

Merging the Findings

Analysis of the survey data revealed a predominance of the themes of engagement, comprehension, close reading, wide reading, rereading and perspective. Through the analysis of the case study data the themes of engagement, close reading and comprehension were corroborated and expanded upon. For example, in the survey, three of these four indicated that they were instructed to “look beyond the dialogue, develop a back-story for the character” and doing so expanded the possibilities of the text. To which David said, “We were asked to read a script and analyze the mood of the scene and to understand some of the background information that impacts the characters throughout the scene.” (SI 11). Kyle added that one of his high school theatre teachers told him, “. . . it is important to understand the character that you are reading for in the script before actually reading him/her” (SI 11).

Those who acted also described how studying their characters by themselves was never enough but it was through interactions with the director and other cast members the potential for alternative meanings emerged suggesting that the nature of theatre, particular play performance, is particularly aligned with a social constructivism framework of education. Carrie found “Working in a group, you start to learn, ‘Oh, there’s another way to do this!’ I think it sort of forces you to look at things differently. You can’t just say this is the only answer and this is how I’m going to do it”. Nate simply found it easier to read with theatre peers. “It wasn’t like I was reading for a class; it was more like I was reading with my friends where I could have fun and even with the teacher being close with me”.

Discussion and Implications

This study purposefully selected 168 theater undergraduate students as participants and it was determined that 44 participants were struggling readers. These 44 adult students were asked to reflect back on earlier experiences in K-12 grades as struggling readers to determine the impact that theatre activities had on their reading. Even though these findings are not generalizable, this study did show that these 44 struggling readers believed involvement in various theatre/drama activities had a positive impact on their reading abilities(RQ1).

The theatre/drama activities that were perceived to have the most positive influence on these struggling readers were acting, reading scripts, performing and directing (RQ2). The case studies indicated that once students found an authentic purpose to read and got the theatre bug, they read more widely, reread with a purpose, and read more closely in order to improve their acting. This was supported by the participants as they reported reading a script an average of 22 times in order to understand the nuances of the text and characters (Table 1).

Second, using the merging data, it was determined that 13 reading skills and strategies were built using theater/drama activities. As seen in RQ 3 and 4, close reading, rereading, wide reading, and gaining perspective all were noted in helping build comprehension of text. Additionally, engagement and peer/teacher interactions were felt to be important in looking at and understanding different nuances of the text.

As comprehension is the ultimate goal of reading instruction, it was not surprising that this was listed first. Comprehension was followed by engagement, close reading, wide reading, perspective and social interaction. This supports various reading research. Engagement is necessary, as without it one's willingness to read is minimal. Thus, the importance of engagement is obvious as one must be intrinsically motivated to read (Becker et al, 2010; Gambrell, 2011). If students do not read, they will not get any better at reading which supports the Matthew Effect (Stanovich, 1986). Thus, authentic reading activities can provide a powerful motive read, Next, it is not surprising that close reading ranked high as well, as close reading or rereading for a specific purpose is directly connected to comprehension and plays a major role in theater activities (Boyles, 2012; Cummins, 2013; Fisher & Frey, 2014). Investigating a script to find hidden meanings and nuance are essentially exercises in higher level thinking process critical for the understanding all text close reading.

This study began with the assumption that students would talk about how being involved would result in repeated readings that led to increased fluency which in turn led to increased comprehension. However, this sequencing did not happen until the interviews.

Additionally, the fact that close reading was so often reported as a by-product of theatre/drama activities was unexpected. Another unforeseen result was the importance of social interaction. Struggling readers found it a safe venue to improve their reading fluency and perception of the text. But specific mention of the ability to read connected text at an appropriate rate with good expression just didn't emerge until the case study interviews.

Thus, for these struggling reading undergraduate students involvement in theater/drama activities provided authentic reasons to engage in various reading

activities that built reading skills and improved their comprehension of text. Therefore involvement in theatre/drama activities should be viewed as time on task towards reading improvement as they offer numerous opportunities for reading development in a variety of roles. Obviously actors read to develop characters and memorize lines, and directors become as familiar with a script as a conductor is with a musical score, and similarly stage managers read the script many times to gain familiarity with the mechanics of the play. Likewise costume, lighting, and set designers read their scripts to develop the necessary mental imagery to do their jobs. Teachers of all grades should include theatre production as part of their curriculum. Curricular decision makers should consider the possible positive impact the repeated reading of scripts leading to performance by all participants in a theatre production could have on struggling and reluctant readers.

Additionally, theatre educators might possibly pay more covert attention to the struggling readers in their midst to see that they are taking full advantage of theatre's potential of reading remediation. Perhaps a part of their teacher education could illuminate them to the simple power of repeated and close reading. Colleges might consider developing a 'Reading in the Theatre' course for theatre educators that would make clear the kinds of reading problems they may encounter, and how theatre has the potential to work as an agent for improvement for struggling readers. Currently unexplored, underutilized, and often unappreciated, theater activities hold promise for struggling readers as venues for the development of skills critical for reading achievement.

References

- Becker, M., McElvany, N., & Kortenbruck, M. (2010). Intrinsic and extrinsic reading motivation as predictors of reading literacy: A longitudinal study. *Journal of Educational Psychology* 102(4), 773-785.
- Benjamin, R. & Schwanenflugel, P. (2010). Text complexity and oral reading prosody in young readers. *Reading Research Quarterly*, 45(4), 388-404.
- Beyda, S. (2003). The use of theatre as an instructional strategy in the content areas for students with reading and learning disabilities. *Learning Disabilities: A Multidisciplinary Journal*, 12(2), 65-74.
- Boyles, N. (2012). Closing in on close reading. *Educational Leadership*, 70(4), 36-41.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.
- Cummins, S. (2013). What students can do when the reading gets rough. *Educational Leadership*, 71(3), 69-72.
- Dowhower, S. (1987). Effects of repeated reading on second-grade transitional readers' fluency and comprehension. *Reading Research Quarterly*, 22(4), 389-406.

- Fisher, D. & Frey, N. (2014). Close reading as an intervention for struggling middle school readers. *Journal of Adolescent & Adult Literacy*, 57(5), 367-376.
- Gambrell, L. (2011). Seven rules of engagement: What's most important to know about motivation to read. *The Reading Teacher*, 65(3), 172-178.
- Klauda, S. & Guthrie, J. (2008). Relationships of three components of reading fluency to reading comprehension. *Journal of Educational Psychology*, 100(2), 310-321.
- Kuhn, M. & Stahl, S. (2003). Fluency. *Journal of Educational Psychology*, 95(1), 3-21.
- McMaster, J. (1998). 'Doing' literature: Using drama to build literacy. *Reading Teacher*, 51(7), 574.
- Rasinski, T., Rikli, A., & Johnston, S. (2009). Reading fluency: More than automaticity? More than a concern for the primary grades? *Literacy Research & Instruction*, 48(4), 350-361.
- Rose, D., Parks, M., Andros, K., & McMahon, S. (2000). Imagery-based learning: Improving elementary students' reading comprehension with drama techniques. *Journal of Educational Research*, 94(1), 55-63.
- Rosenblatt, L. (1968). *Literature as exploration*. New York City, NY: Appleton-Century. (Original work published 1938)
- Samuels, J. (1979). The method of repeated readings. *The Reading Teacher*, 32(4), 403-408.
- Stanovich, K. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21(4), 360-407.
- Stayer, F. & Allington, R. (1991). Fluency and the understanding of texts. *Theory into Practice*, 30(3), 143-148.

PREPARING LITERACY COACHES: DESIGNING A COACHING PRACTICUM

Susan L. Massey

Northern Illinois University

Abstract

Literacy coaches need preparation and training in working with struggling readers, working with teachers in a leadership and/or coaching role, and working as literacy leaders within the school context. University graduate reading programs are well positioned to provide this preparation for novice literacy coaches. This article outlines a coaching practicum course delivered in an online format as part of a reading specialist preparation program. The course assignments provided graduate reading candidates an opportunity to gain experience related to literacy leadership and coaching roles within a school setting.

The International Literacy Association expanded their definition of the reading specialist to include literacy coaching as part of the *Standards for Reading Professionals* (International Reading Association, 2010). According to the standards, accredited universities preparing reading professionals must provide candidates with knowledge and experiences working with struggling readers, working with teachers in a coaching role, and working as literacy leaders within a school context. Reading professionals must “be prepared to fulfill duties across all three role definitions” (International Reading Association, 2010, p. 75) in the combined reading specialist/literacy coach role.

The results of a recent nationwide survey indicated a continuing need for university graduate preparation programs to include experiences designed to prepare candidates for these varying roles (Bean et al., 2015). In particular, the results suggested the need for prospective literacy coaches to receive additional knowledge and training related to adult learning theory, one-on-one coaching,

literacy leadership, and effectively using coaching language in coach-teacher relationships (Bean et al., 2015; Calo et al., 2015). In addition, educator preparation providers are expected to provide reading specialist candidates with clinical partnerships and practices as established by the Council for the Accreditation of Educator Preparation (CAEP Standard 2: Clinical Partnerships and Practice, 2015). Literacy coaches need quality preparation and continued professional development to cultivate the content knowledge and pedagogy necessary for successful K-12 coaching roles (International Literacy Association, 2015).

University graduate reading programs are uniquely responsible for the initial training of literacy coaches. This article relates how one university designed a new literacy coaching practicum preparing graduate reading specialist candidates to assume a variety of coaching roles within a school setting. The practicum design includes opportunities to gather and analyze school assessment data, analyze literacy curriculum and materials, and work cooperatively with a teacher colleague in a coaching cycle.

Theoretical Background and Practicum Rationale

In preparing reading specialist candidates for the literacy coach role, candidates need knowledge and experience in literacy content, coaching pedagogy, and andragogy, the art and science of adult learning (Coburn & Woulfin, 2012; Elish-Piper & L'Allier, 2014; Lassonde & Tucker, 2014). Literacy coaching of classroom teachers is considered a form of job-embedded professional development framed within a socio-cultural theory, as learning is situated within social contexts (Rogoff, 1997). The situated learning perspective guides the coach preparation process when the training is embedded in a school context involving collaboration among candidates, teachers, and university faculty members.

Modern views of adult learning are multidimensional and take into consideration the sociocultural context of adult learning and factors influencing a transformative experience. Contemporary *transformational learning theory* recognizes the importance of critical reflection through peer dialogue as a factor in adult learning (Taylor, 2008). Additionally, the contemporary theory substantiates the importance of a holistic approach involving relationships and feelings as necessary factors in adult learning and transformation (Taylor, 2008). This is the sociocultural aspect of adult learning and is the rationale behind collaboration and active learning. Transformative learning theory guides effective practice in working with adults to be transformative practitioners (Kose & Lim, 2011) and to effect positive changes in classroom instruction and teacher efficacy (Ferguson, 2014).

The reading specialist candidates complete a practicum assessing and tutoring students. However, this new course was designed to help reading specialists advance their understanding of literacy coaching. The literacy coaching practicum allows candidates an opportunity to work within a school setting to critically analyze the horizontal and vertical alignment of curriculum, explore literacy materials (print and digital) available in the school, and investigate instructional practices according to best practice and theoretical assumptions. As a capstone experience, this literacy coaching practicum allows candidates to work through a coaching cycle of observation, conferencing, lesson demonstrations, and planning (Puig & Froelich, 2011) as they work collaboratively with a teaching colleague. As part of the coaching cycle, candidates and the collaborative teacher reflect on their experiences and plan for effective lessons and professional development needs. Reflection is a key component of andragogy, the art and science of adult learning (Knowles, et al., 2011). Contemporary transformative learning theory posits the sociocultural aspect of a sociocultural context and the critical reflection through peer dialogue (Taylor, 2008). Throughout the coaching cycle, candidates frame their work within research and theory related to best literacy practices.

The coaching practicum experience helps develop the candidates' self-efficacy as school literacy leaders as they learn about literacy coach roles and delve into these roles as a novice coach (Mongillo et al., 2012). The concept of teacher self-efficacy is based on Bandura's (1977) perspective asserting that motivation is influenced by both outcome and efficacy expectations. As candidates learn and engage in authentic coaching experiences, they develop an image of themselves as literacy leaders. This article outlines the coaching roles providing the foundation for the practicum and guiding the candidates in becoming transformative practitioners. It also describes the projects and assignments used in a university online literacy coaching practicum.

Literacy Coach Practicum Components

Coaching roles were defined in response to current school trends in a recent research brief prepared by the International Literacy Association (ILA, 2015). Among the roles reading specialists can assume in a school-based environment are an instructional leader, a literacy resource to classroom teachers, a professional development agent, a literacy coach, or a coordinator and evaluator of a school literacy program. This guides the academic coursework necessary for preparing reading specialist professionals. Reading specialist candidates need authentic experiences in each area as part of their university graduate program.

A university literacy department plans courses addressing both the leadership and coaching aspects of the reading specialist role. At one Midwestern university housing approximately 10,000 students, the graduate reading program was analyzed in response to the 2010 accreditation standards. As part of the analysis, it was noted that candidates did not receive sufficient preparation for their role as a coach working within a school setting. Thus, a coaching practicum was added and an elective taken away.

While an existing leadership course and tutoring practicum experiences with lower level and upper level students were already in place, the need for a course specifically devoted to coaching was evident. The existing leadership course was redesigned to focus mainly on the school literacy leadership and professional development role of the literacy coach. In the redesign, the course projects were adjusted to meet the accreditation standards. As a result, three main leadership assignments were identified to meet the needs of the reading teacher and reading specialist candidates in the existing leadership course: 1) grant proposals, 2) professional development in-service presentation, and 3) building a community through literacy project.

The newly created literacy coaching practicum course focused on coaching within a school environment situated within an online higher education learning community and in an authentic school-based practicum experience. Candidates engaged in a synchronous and asynchronous online learning experience with fellow reading specialist candidates and a faculty member. Candidates completed projects within their own school or in collaboration with a partner school. The following projects addressed standards for reading specialists and comprised the major course assignments: school-wide assessment project, school-wide curriculum project, and coaching cycle. According to the standards, candidates must have experiences as an interventionist, as a literacy coach, and as literacy program leaders. Figure 1 provides a brief description of the course projects and their alignment to the International Reading Association 2010 Standards. Specific information about each assignment is presented below.

Assignment #1: The School-wide Assessment Project

To exhibit a leadership role related to assessment, candidates completed a school-wide assessment project. The assessment project addresses standard 3 (IRA, 2010) as candidates demonstrate their ability to use multiple sources of data to examine assessment practices and their relationship to instruction on a school-wide scale. When training literacy coaches, the ability to organize and analyze multiple sources of data is key for instructional decision-making and should be an integral part of a preparation program (Mokhtari, Rosemary, & Edwards, 2007).

Assignments	Standards Addressed (ILA, 2010)	Brief Project Description
School-wide Assessment Project	3.2	Candidates compile a list of assessment tools from one school, analyze the information according to how assessment is used to inform instruction, and then prepare a report outlining strengths and weaknesses of the program and recommendations for effective formal and informal assessments.
School-wide Curriculum Project	2.1, 2.3, 6.1, 6.3, 6.4	Through interviews, surveys, and direct observation, candidates gather information related to the literacy curriculum in their school. The curriculum is described and analyzed according to print and digital materials, literate environment, vertical and horizontal alignment, instructional approaches, technology, and involvement with various stakeholders (e.g., parents, administrators, support personnel). After analyzing the data, candidates report their findings, analysis, and recommendations for strengthening the literacy curriculum and instruction.
Coaching Cycle	1.1, 1.2, 1.3, 2.2, 3.2, 3.3, 4.1, 4.2, 5.1, 5.2, 5.3, 5.4, 6.2, 6.3	The coaching cycle provides an authentic context whereby the candidates assume the roles of literacy coach and role model while working with a teacher colleague. Candidates engage in a cycle consisting of observation, collaborative conferences, demonstration lessons, and reflection. At the conclusion of the multiple week cycle, the candidate prepares an action plan comprised of a summary of the cycle and recommendations for assessment, instruction, and instructional delivery.

Figure 1. Project descriptions and alignment to International Literacy Association 2010 Standards.

To improve reading and writing instruction, Mokhtari et al. (2007) suggested that literacy leaders consider three major categories of data: 1) professional development data, 2) classroom data, and 3) reading performance data.

After describing the demographics of the school, candidates identify formal and informal assessment measures used to assess students’ literacy skills. The information is gathered from teachers, literacy leaders, and administrators. Candidates create a timetable with assessments, administration dates, relationship of the assessments to the components of reading and writing, and details related to how data are used to guide instruction across a particular grade span (e.g., K-2, 3-5, 6-8). In addition, candidates describe the school’s response to intervention plan, accommodations, and the criteria for student placement into

intervention programs. Candidates then analyze the current school assessment plan and describe strengths and weaknesses of the school's assessment program. Based on research support and *Standards for the Assessment of Reading and Writing* (Johnston, 2010), candidates create recommendations for the school to improve their assessment program and professional development initiatives for the purpose of improving student instruction and achievement.

Assignment #2: School-wide Curriculum Project

For the school-wide literacy curriculum assignment, candidates describe and analyze their school curriculum based on survey results, interviews with teachers and administration, and observational data. This assignment addresses standards 2 and 6 of the *Standards for Reading Professionals* (IRA, 2010) as candidates analyze curriculum, materials, and various instructional approaches used by classroom teachers in their school and provide recommendations for improving the literacy program. This is important, as literacy coaches are responsible for assisting all building teachers in effectively using the curriculum and ensuring the curriculum aligns with district and state standards (Dole & Nelson, 2012).

First, each candidate designed and administered not only their own survey but the interview questions. Next, they surveyed and interviewed a cross section of teachers and administrators to gain information about the school's curriculum, materials, and instructional practices. This was important as the candidates knew the curriculum for their grade level/content area; however, they were determining curriculum materials and instructional practices used at other grade levels. In addition, they observed a cross section of teachers and classrooms to note the common materials and instructional practices used.

After gathering the data, candidates analyzed the results according to research in the area of school improvement and prepared a report outlining strengths and research-based recommendations. They considered vertical and horizontal alignment of the curriculum with district and state standards. They noted instructional grouping practices, technology integration, techniques to motivate students, and involvement of family and community in the literacy program. The theory and research justifying effective instructional literacy practices documented in the school setting were presented as part of the report.

Assignment #3: Coaching Cycle

The coaching cycle was designed based on current research on effective coaching (e.g., Elish-Piper & L'Allier, 2014; Frost, Buhle, & Blachowicz, 2009; Puig & Froelich, 2011) and the Targeted Coaching Model (Elish-Piper & L'Allier, 2014;

L’Allier & Elish-Piper, 2011). The coaching cycle project was designed to meet all standards for reading professionals (IRA, 2010), especially as they relate to supporting and leading teachers in authentic school environments. Based on a review of literacy coaching research, Ippolito (2010) recommended that universities work to better prepare novice literacy coaching by focusing on vignettes and videos within one-on-one and group coaching sessions. To this end, the coaching practicum was designed to introduce graduate students to the coaching cycle through course readings and by viewing vignettes contained in a literacy coaching video series (L’Allier & Elish-Piper, 2011).

First, the candidates viewed videos and identified the various coaching stances observed in the videotaped teacher-coach conversations. They identify the videotaped coach’s use of the following coaching stances in conversing with a teacher: facilitating, collaborating, and consulting (L’Allier & Elish-Piper, 2012). Coaches assume a facilitating stance when they allow teachers an opportunity to share and reflect while paraphrasing what a teacher says during a conference (L’Allier & Elish-Piper, 2012). The collaborative stance is evident when the coach and teacher co-analyze situations and co-develop ideas to share in the problem-solving process (Elish-Piper & L’Allier, 2014). The consulting stance is exemplified by the coach offering instructional suggestions to the teacher, supplying information to the teacher, and/or taking responsibility for leading the problem-solving process (Elish-Piper & L’Allier, 2014; L’Allier & Elish-Piper, 2012). After learning about the coaching process through readings and video analysis, candidates applied their knowledge to an authentic coaching situation.

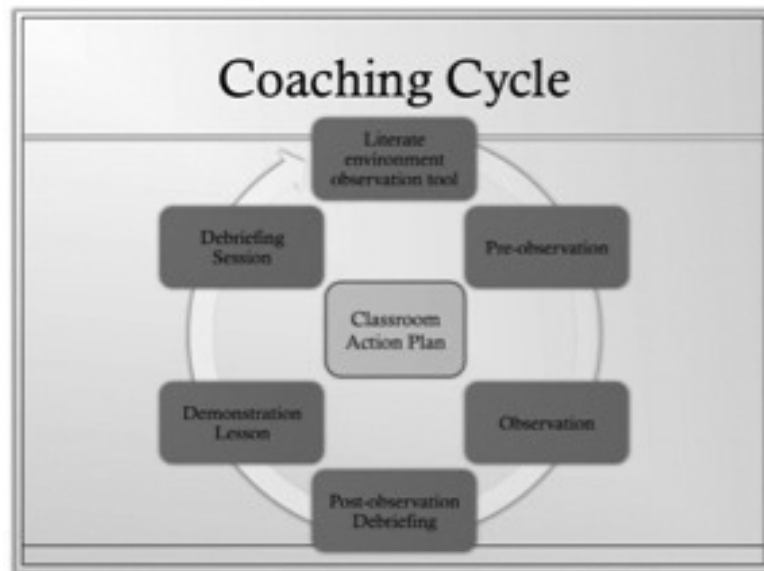


Figure 2. Coaching Cycle Components.

Combining the video vignettes with authentic coaching conversations assisted the candidates in understanding the discourse between coach and teacher used to guide and improve instructional practices (Heineke, 2013).

After viewing the videos and talking with others about the coaching cycle, eight smaller assignments were completed. These smaller assignments provided scaffolding for the candidates as they practiced what they had learned (Moran, 2007).

Literate Environment Observation Tool. The graduate student acting as a coach and the teacher together analyzed the literate environment of the teacher's classroom using a published literate environment checklist appropriate for the grade level (e.g., Wolfersberger, Reutzel, Sudweeks, & Fawson, 2004). If the candidates were working with a middle or high school teacher, sometimes they combined several different checklists from a variety of resources. When completing the checklist, the coach and teacher discussed the positive attributes of a literate environment observed and discussed areas in which the literate environment could be enhanced for student achievement.

Pre-observation Conference: The coach and teacher met together in a pre-observation conference in which the teacher outlined the objectives of the upcoming lesson in which the coach observed. As part of the conference they discussed pertinent assessment data used to plan the lesson, materials and technology planned for the lesson, and specific children the teacher wanted the coach to observe. In addition, the coach discussed major theories supporting effective classroom instructional approaches, grouping arrangements, motivation, and classroom routines pertaining to the specific classroom and lessons.

Observation: The coach observed the teacher in an instructional lesson and took note of the routines, grouping, student engagement, and the effectiveness of the teacher's instruction. In addition, the coach noted the engagement, strengths, and areas of need related to the targeted children discussed in the pre-observation conference.

Post-observation Debriefing Conference: The coach and teacher discussed the lesson successes and modifications in a post-observation debriefing conference. Teachers first had an opportunity to reflect on their lesson delivery and student engagement before the coach shared his or her observations. Together they discussed areas in which the teacher desired additional modeling or support from the coach. To this end, they determined a specific instructional area in which the coach planned and taught a demonstration lesson in the teacher's classroom.

Demonstration Lesson: Based on the determined need for additional instructional practice and modeling in a specific area, the coach went into the teacher's room to teach a lesson. While the coach taught, the teacher completed a

form noting the coach's use of materials and technology, specific student engagement and performance, and wrote additional comments related to the strategies and/or methods enacted during the lesson.

Debriefing Session: The final debriefing session allowed the coach and teacher an opportunity to discuss the lesson cycle and make plans for the future. Although time did not allow the coach and teacher to continue working together in a coaching cycle, they discussed goals and modifications for the teacher. In addition, they worked together to create a professional development plan for the teacher.

Classroom Action Plan: At the conclusion of the coaching cycle, the graduate student coach prepared a Classroom Action Plan in which he or she wrote a description of the school and classroom context and provided recommendations for instructional practices, materials, differentiation, grouping practices, and technology integration based on observations and conferences with the teacher. Throughout the Classroom Action Plan, candidates made reference to current research and theoretical justification to support the recommendations. The candidate also created a list of readings, materials, podcasts, and webinars useful in supporting the teacher's ongoing professional development.

Partner Video Reflection: Candidates were required to video-tape their coach-teacher debriefing conferences. All conference videos were uploaded to a private YouTube channel so that graduate students had the opportunity to view their classmates' videos for analysis and reflection. Partners were assigned to analyze one another's video and reflect on the coaching stances observed in the debriefing conference: facilitating, collaborating, and consulting (L'Allier & Elish-Piper, 2012). The partners noted the strengths and/or effective aspects of the conferences as well as questions that remained after viewing and analyzing the video. Throughout the coaching cycle, the graduate candidates maintained a coaching log in which they documented the time spent in coaching roles during the semester along with brief reflections to accompany each entry.

Final Thoughts

As the graduate students worked in school environments during the literacy coaching practicum experience, they had the opportunity to look critically at their school assessment program, curriculum, and teaching practices within their building for the purpose of improving the school literacy environment. In ongoing efforts to refine and define literacy coach roles, practicing coaches focused on learning standards through an emphasis on curriculum and instruction, the creation of literate environments, professional learning and leadership, and assessment and evaluation (Hathaway et al., 2016). Through data

collection, observations, collaborations, conversations, and reflection, the candidates experienced working with various roles and responsibilities of a novice literacy coach.

Anecdotal comments retrieved from student course evaluations indicated that candidates expanded their understanding of the horizontal and vertical alignment of curriculum and assessment in their schools. Graduate student candidates found the coaching cycle to be of particular relevance to their coaching training and requested additional resources related to developing a coach-teacher relationship. The university graduate program is a first step in the preparation of effective literacy coaches; however, ongoing professional development is necessary for literacy leaders actively involved in school coaching. “Wonderful things are possible when teachers and administrators commit to ongoing conversation about and examinations of the school culture (both spoken and unspoken), the reading curriculum, reading assessment, and, most importantly, reading instruction” (Taylor, 2011, p. 2).

References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bean, R., Kern, D., Goatley, V., Ortlieb, E., Shettel, J., Calo, K., ... & Cassidy, J. (2015). Specialized literacy professionals as literacy leaders: Results of a national survey. *Literacy Research and Instruction*, 54(2), 83-114.
- CAEP Standard 2 clinical partnerships and practice (2015). Retrieved from <http://www.caepnet.org/standards/standard-2>
- Calo, K., Sturtevant, E., & Kopfman, K. (2015). Literacy coaches' perspectives of themselves as literacy leaders: Results from a national study of K-12 literacy coaching and leadership. *Literacy Research and Instruction*, 54(1), 1-18.
- Coburn, C. & Woulfin, S. (2012). Reading coaches and the relationship between policy and practice. *Reading Research Quarterly*, 47(1), 5-30.
- Dole, J. & Nelson, K. (2012). Literacy leadership in the elementary school reading program. In R. M. Bean & A. S. Dagen (Eds.), *Best practices of literacy leaders: Keys to school improvement* (pp. 147-161). New York City, NY: The Guilford Press.
- Elish-Piper, L. & L'Allier, S. (2014). *The Common Core coaching book: Strategies to help teachers address the K-5 ELA standards*. New York City, NY: The Guilford Press.
- Ferguson, K. (2014). How three schools view the success of literacy coaching: Teachers', principals', and literacy coaches' perceived indicators of success. *Reading Horizons*, 53(1), 22-48.
- Frost, S., Buhle, R., & Blachowicz, C. (2009). *Effective literacy coaching: Building expertise and a culture of literacy*. Alexandria, VA: ASCD.
- Hathaway, J., Martin, C., & Mraz, M. (2016). Revisiting the roles of literacy coaches: Does reality match research? *Reading Psychology*, 37(2), 230-256.

- Heineke, S. (2013). Coaching discourse: Supporting teachers' professional learning. *The Elementary School Journal*, 113(3), 409-433.
- International Literacy Association. (2015). The multiple roles of school-based specialized literacy professionals [Research brief]. Newark, DE: Author.
- International Reading Association. (2010). *Standards for reading professionals-Revised 2010*. Newark, DE: International Reading Association.
- Ippolito, J. (2010). Three ways that literacy coaches balance responsive and directive relationships with teachers. *The Elementary School Journal*, 111(1), 164-190.
- Johnston, P. (2010). *Standards for the assessment of reading and writing*. Newark, DE: International Reading Association.
- Knowles, M., Holton, E., & Swanson, R. (2011). *The adult learner: The definitive classic in adult education and human resource development*. Burlington, MA: Elsevier.
- Kose, B. & Lim, E. (2011). Transformative professional learning within schools: Relationship to teachers' beliefs, expertise and teaching. *Urban Review*, 43(2), 196-216.
- L'Allier, S. & Elish-Piper, L. (2011). *The literacy coaching series* [DVD]. Elburn, IL: LearnSure, Inc. Available from <http://theliteracycoachingseries.com>
- L'Allier, S. & Elish-Piper, L. (2012). Literacy coaches in elementary schools. In R. M. Bean & A. S. Dagen (Eds.). *Best practices of literacy leaders: Keys to school improvement* (pp. 43-62). New York City, NY: The Guilford Press.
- Lassonde, C. & Tucker, K. (2014). *The literacy leadership handbook: Best practices for developing professional literacy communities*. New York City, NY: Pearson.
- Mokhtari, K., Rosemary, C., & Edwards, P. (2007). Making instructional decisions based on data: What, how, and why. *The Reading Teacher*, 61(4), 354-359.
- Mongillo, G., Lawrence, S., & Hong, C. (2012). Empowering leaders in a master's in literacy program: Teacher candidates' self-efficacy and self-perception as literacy leaders. *Action in Teacher Education*, 34(5-6), 551-565.
- Moran, M. (2007). *Differentiated literacy coaching: Scaffolding for student and teacher success*. Alexandria, VA: ASCD.
- Puig, E. & Froelich, K. (2011). *The literacy coach: Guiding in the right direction* (2nd ed.). New York City, NY: Pearson.
- Rogoff, B. (1997). Evaluating development in the process of participation: Theory, methods, and practice building on each other. In E. Amsel & A. Renninger (Eds.), *Change and development: Issues of theory, Application, and method* (pp. 265-285). Hillsdale, NJ: Erlbaum.
- Taylor, B. (2011). *Catching schools: An action guide to schoolwide reading improvement*. Portsmouth, NH: Heinemann.
- Taylor, E. (2008). Transformative learning theory. *New Directions for Adult and Continuing Education*, 2008(119), 5-15.
- Woltersberger, M. E., Reutzel, D. R., Sudweeks, R., & Fawson, P. C. (2004). Developing and validating the Classroom Literacy Environmental Profile (CLEP): A tool for examining the "print richness" of early childhood and elementary classrooms. *Journal of Literacy Research*, 36(1), 83-144.

LEADERSHIP FUNCTIONS OF NATIONALLY BOARD CERTIFIED TEACHERS AND TEACHER CERTIFICATION CANDIDATES

Allison Swan Dagen

West Virginia University

Aimee Morewood

West Virginia University

David Loomis

West Virginia University

Abstract

This quantitative research study analyzed self-reported survey data from a sample of primary grade Nationally Board Certified Teachers (NBCT) and primary grade Nationally Board Certification candidates (NBC-C) from a mid-Atlantic state. Participants were asked to report on their engagement in teacher leadership functions and responsibilities as defined in the Teacher Leader Model Standards (Teacher Leadership Exploratory Consortium, 2011). Both groups indicated they were engaged in leadership functions across all seven TLMS domains and five functions were found to be statistically significant.

As researchers, policy makers and experts grapple with educational reform, movements recognizing the important role teachers can play in informal and formal leadership at their school is growing. Katzenmeyer and Moller (2009) refer to this notion of teacher leadership as a “sleeping giant” as classroom teachers, especially those engaged in leadership responsibilities, are an untapped resources

in school reform. Teacher leadership is complex as opportunities vary from district to district and school to school. In the past, teachers who have assumed leadership responsibilities have engaged in administration, activist-type teacher movements, or union representation (IEL, 2001). However, Silva, Gimbert, and Nolan (2009) present a more contemporary view of collaborative teacher leadership as a means of influencing school culture. It is this type of collaboration and leadership that promotes a culture of professional learning; thus, contributing to a change in school culture and the traditional role of classroom teacher plays within the school.

To address the specific roles and responsibilities of teacher leadership, the Teacher Leadership Exploratory Consortium (TLEC), a group consisting of state education representatives, higher education stakeholders and those affiliated with national associations, reviewed research on teacher leadership and in 2011 released the Teacher Leader Model Standards (TLMS) (Teacher Leadership Exploratory Consortium, 2011). The TLMS standards document outlines the knowledge, skills, and competencies teachers need to fulfill teacher leadership roles in their schools.

In this study, we chose to closely examine the intersection of the National Board for Professional Teaching Standards (NBPTS, 2001) certification, a highly recognizable form of quality professional learning and the teacher leadership responsibilities identified in the TLMS addressing the following guiding research question, “What leadership functions are National Board Certified Teachers (NBCTs) and NBC candidates (NBC-Cs) engaged in within their schools?”

Background

Teacher Leadership

Teacher leadership is defined by York-Barr and Duke (2004) as “the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities in order to improve teaching and learning practices with the aim of increased student learning and achievement” (p. 287). Recognizing the important role teachers play in the informal and formal leadership of their schools is noteworthy (Barth, 2013; Camburn, et al, 2008; Danielson, 2007; Katzenmeyer & Moller, 2009; Silva, et al, 2000; Spillane, 2005). Research indicates that 51% of teachers surveyed engage in leadership at their schools (MetLife Survey of the America Teacher, 2012). In addition, this survey suggests that these teachers are interested in continuing with these responsibilities but not in a traditional role (e.g. school

principal). Further, in a 2007 study of high-profile award winning teachers (e.g. Nationally Board Certified, Milken teachers, etc.), Dozier found 97% of the surveyed teachers considered themselves teacher leaders. Specifically, these teachers identified themselves as leaders by engaging in their school's leadership through involvement with professional development, mentoring, and curriculum development.

To highlight and guide the importance of teacher leadership, the Teacher Leadership Exploratory Consortium created the Teacher Leader Model Standards (TLEC, 2011). This group included representatives from schools, higher education, national organizations and policymakers. The group examined research, interviewed teacher leaders and studied best practices for teacher leadership to develop the standards document. The TLMS document was released as a “means to stimulate dialogue among stakeholders of the teaching profession about what constitutes the knowledge, skills and competencies that teachers need to assume leadership roles in their schools, district, and the profession” (2011, p.3). The TLMS is represented through seven domains:

- Domain 1: Fostering a Collaborative Culture
- Domain 2: Accessing and Using Research
- Domain 3: Promoting Professional Learning
- Domain 4: Facilitating Instructional Improvement
- Domain 5: Promoting Use of Assessments And Data
- Domain 6: Improving Outreach to Families and Communities
- Domain 7: Advocating for Students and the Profession

(2011, p.9)

Each of these seven domains includes 37 “function” statements clarifying the domain. For example, Domain 3: Promoting Professional Learning for Continuous Improvement includes the function statement “f. Advocates for sufficient preparation, time, and support for colleagues to work in teams to engage in job-embedded professional learning” (TLEC,2011, p.16). This example demonstrates how the function more specifically depicts and operationalizes the domain.

National Board Certification

Since 1987, the National Board Certified Teachers (NBPTS) has provided state-certified teacher educators with an opportunity to engage in a high-quality professional development focusing on teacher knowledge, skill and reflection.

The process is rigorous and nationally over 110,000 have successfully earned the certification. While considering this number of teachers throughout the United States that have achieved this prestigious certification, it is important to consider that research indicates the attrition rate of National Board candidates to be quite high; ranging from 37-55% throughout the certification process (Coskie & Place, 2008; Sato, et al, 2008).

National Board candidates are able to focus on one of 25 content specific areas (e.g., Literacy: Reading and Language Arts, Mathematics, Early Childhood Generalist, Music, etc.). Each content area has its own set of specific standards guiding what teachers should be able to demonstrate in the specific content areas. Common to all 25 certification areas is the NBPTS Core Proposition framework consisting of five overarching guiding belief statements:

- Proposition 1: Teachers are committed to students and learning.
- Proposition 2: Teachers know the subjects they teach and how to teach those subjects to students.
- Proposition 3: Teachers are responsible for managing and monitoring student learning.
- Proposition 4: Teachers think systematically about their practice and learn from their experience.
- Proposition 5: Teachers are members of learning communities.

(NBPTS, 2002, p.3)

The first four propositions identify core beliefs for the individual teacher. Core Proposition 5, however, focuses on the interactive and collaborative role NBCTs play in their schools. Proposition 5 asserts *Teachers are members of learning communities* extending the reach of the teacher beyond a single classroom to include teachers collaborating with others, building partnerships with communities, serving as a resource for professional development and curriculum development, and serving as a resource to their schools.

National Board Certification and Leadership

Research has shown that NBCTs do indeed assume leadership roles (e.g., coaches, mentors) in their schools (Freund, et al, 2005). In a 2001 study, the NBPTS (2002) surveyed Nationally Board Certified Teachers (n = 4500) and found 99% reported being engaged in some type of leadership responsibilities such as mentoring new teachers, developing programs, and selecting materials (Yankelovich

Partners, 2001). Further, 90% of these teachers reported having greater influence at their schools because of their national certification status.

Koppich, Humphrey and Hough (2006) found a high percentage of the 1000 NBCTs they surveyed reported engaging in various levels of engagement in leadership before earning their certification with 74% participating with curriculum and development, 71% serving as team or grade level leaders, 68% mentoring new teachers and 59% engaging in leadership with professional development. This study also examined motivation for certification and found 45% indicated the possibilities of career advancement while 44% indicated pursuing certification in order to influence changes at their individual school.

Theoretical Framework

As teachers collaborate and discuss explicit content knowledge, pedagogical practices, and curricular events and sequences, student learning improves (Goddard, et al, 2007). It is the interactive collaboration that supports the theoretical underpinnings of this research through a Distributed Leadership Perspective (Spillane, 2005). The focus of this perspective states, “leadership practice is viewed as the product of the interactions of school leaders, followers, and their situation” (Spillane, 2005, p. 144). In this perspective, it is the interactions (e.g., the how and why of leadership) that occur between the leader and the other stakeholders that are reviewed as the impetus for change. This is in contrast to a more customary view of leadership. Traditionally, the leadership products (e.g., the what of leadership) are examined as a leader’s demonstration of change. Using this perspective, many teachers and content specialists may contribute more of/to the school’s leadership than traditionally identified leaders, such as the principal. The Distributed Leadership perspective allows for many to be involved in leadership by focusing on the collaborative interactions that support and sustain educators within different school contexts.

Given the Distributed Leadership’s focus on the interactions of the stakeholders, we propose it supports the collaborative premise behind NBPTs Core Proposition 5 and the TLMS domains and functions. NBPTs Core Proposition 5 suggests teachers collaborate, engage, and work together; similar to the TLMS standards which focus on actions such as facilitating, engaging, modeling, guiding, and supporting peers (Figure 1). Both Core Proposition 5 and the TLMS standards document articulate the necessity of the collaborative process of effective distributed leadership versus a more traditional and silo-positioned leadership role (i.e., a school principal focusing on and completing more managerial leadership tasks).

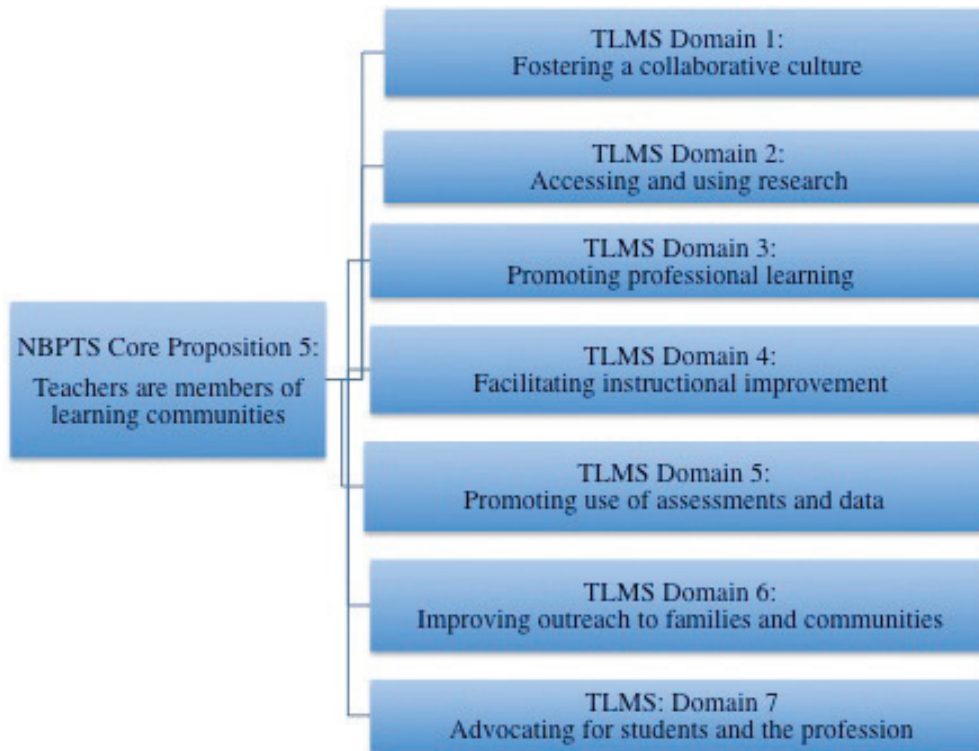


Figure 1. Theoretical Model: TLMS Domains nested within NBPTS Core Proposition 5.

Methods

Research Questions

The research question guiding this quantitative study was “What leadership functions are Nationally Board Certified Teachers (NBCTs) and National Board Certification candidates (NBC-C) engaged with in their schools?” Our specific research questions were:

1. What are the demographics of the NBCTs and NBC-Cs?
2. How frequently do the NBCTs and NBC-Cs report engaging in leadership responsibilities as identified in the TLMS?
3. Are there any differences between the NBCTs and NBC-Cs’ leadership responsibilities as identified in the TLMS?

Research Design

Participants. There are currently 825 teachers in this Mid-Atlantic state who have earned National Board Certification with nearly 150 in the candidacy stage. The participants represented in this study came from one of two groups

of educators, with valid teaching credentials, who were teaching in classrooms across the state: (1.) K-2 teachers who are Nationally Board Certified Teachers (NBCTs) and (2.) prekindergarten (PreK) teachers who are National Board Certification Candidates (NBC-Cs). Using convenience sampling, 32 K-2 NBCTs from a larger data set of 242 NBCTs and 25 PreK NBC-Cs, who were participants in a Claude Worthington Benedum Foundation grant funded initiative to support PreK teachers' National Board candidacy in Literacy, both Reading and Language Arts, completed the self-reported survey online. This survey was both anonymous and voluntary.

Instrument. This research study used a multi-part researcher-created survey anchored in the seven domains and the 37 function statements on the TLMS. The findings presented in this paper focus on Part 1. In Part 1, participants were provided with the title of the TLMS domain and the two or three sentence definition taken directly from the TLMS document. Participants were asked to identify how often they perceived themselves engaging in each of the 37 individual functions. The Likert-type scale used to measure engagement was anchored with the following response options: 5-nearly every day; 4-once a week; 3-once a month; 2-2 to 3 times a year and 1-never (Figure 2). The entire four-part survey was piloted with 107 teachers in a different Mid-Atlantic state and administered a second time, as described above, with 242 teachers in this state (under review). Reliability, as measured by Cronbach's alpha, was .96 for both samples pointing toward the survey's high level of internal consistency.

Data Analysis. Prior to analyses, all incomplete responses were deleted. Descriptive statistics were used for exploratory analyses. Further, nonparametric Mann-Whitney U Tests were used to examine the differences in leadership

Domain 2: Accessing and Using Research to Improve Practice and Student Learning. The teacher leader understands how research creates new knowledge, informs policies and practices and improves teaching and learning. The teacher leader models and facilitates the use of systematic inquiry as a critical component of teachers' ongoing learning and development.

___ a) Assists colleagues in accessing and using research in order to select appropriate strategies to improve student learning

___ Never	___ About 2-3 times a year	___ About once a month	___ At least once a week	___ Nearly every day
-----------	-------------------------------	---------------------------	-----------------------------	-------------------------

___ b) Facilitates the analysis of student learning data, collaborative interpretation of results, and application of findings to improve teaching and learning

___ Never	___ About 2-3 times a year	___ About once a month	___ At least once a week	___ Nearly every day
-----------	-------------------------------	---------------------------	-----------------------------	-------------------------

Figure 2. Excerpt of Domain 2 survey prompts.

function engagement between the two groups. Mann-Whitney U was selected because the samples are independent, and the data are ordinal.

Results

Research Question 1: What are the demographics of the NBCTs and NBC-Cs?

Table 1 presents the demographic findings for each group represented in this study. Both populations were made up of female teachers working across four primary grade bands: PreK, K, 1st or 2nd grade classrooms. The most frequent and highest degree earned across both groups was a Master's degree. The NBCTs in this study were more experienced with 65% reporting 21 years or more whereas the majority of NBC-Cs were less experienced, teaching from 0-11 years (56%). The NBCTs reported earning certification between 2003 and 2014, with 13 of the 32 earning certification as Early Childhood Generalist (ages 3-8). The NBC-Cs population will be eligible for full certification in 2017 and all 25 registered as candidates for Literacy: Reading Language Arts (ages 3-12).

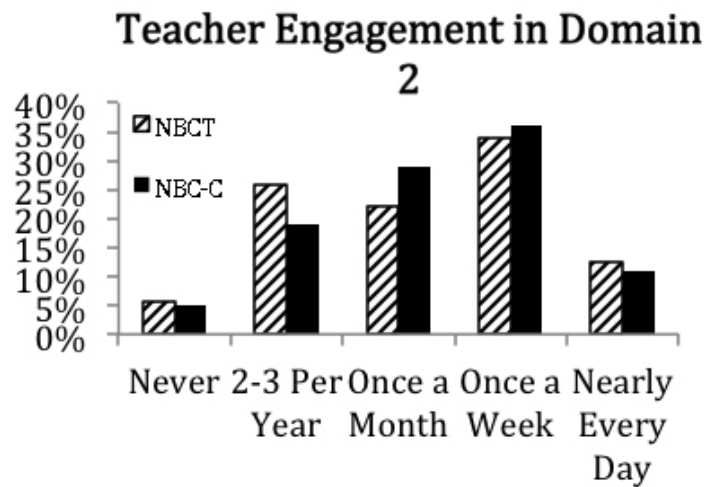
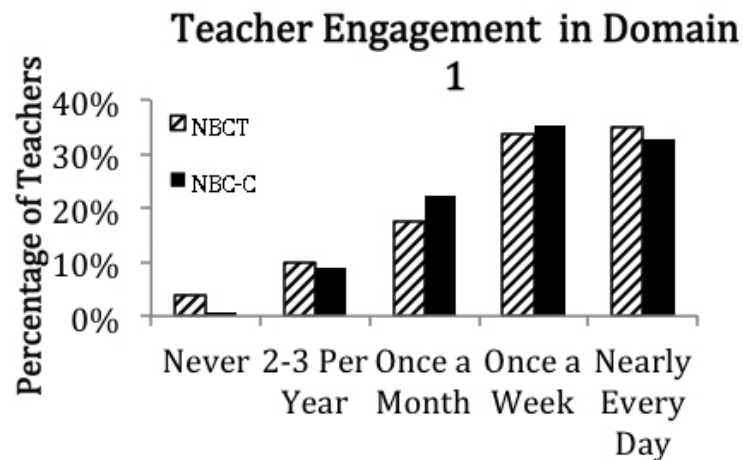
TABLE 1
Demographic Frequencies

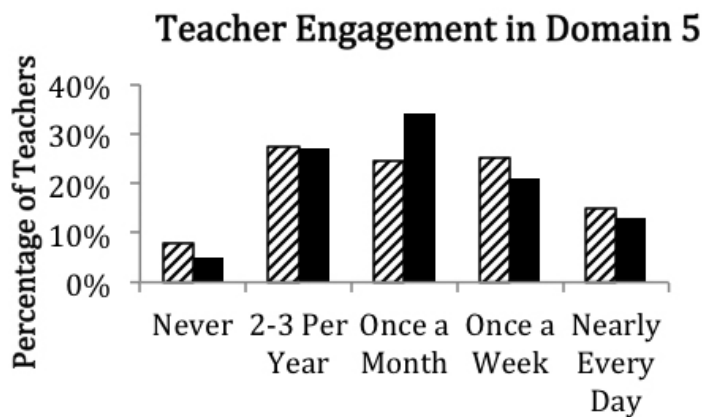
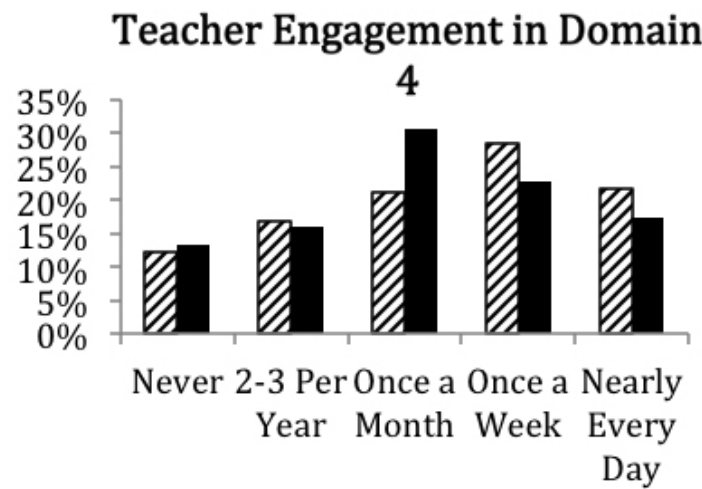
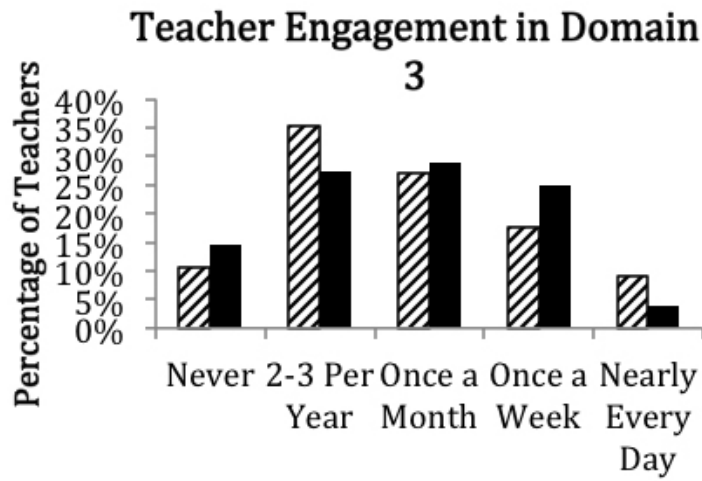
	NBCT	NBC
Gender		
Female	32	25
Male	0	0
Highest Degree Earned		
Bachelors	5	7
Masters	27	18
Grade Level		
Primary grade	32 (K-2)	25 (PreK)
Teaching Experience		
0-5 years	1	7
6-10 years	2	6
11-15 years	5	7
16-20 years	5	3
21 or more	18	2
Not reported	1	-
Earned NBCT		
2003-2008	20	-
2009-2014	12	-
2017	-	<i>(First opportunity)</i>
NBCT Certification Area		
Literacy: RLA	5	25
Early Childhood Generalist	13	-
Other	9	-

Research Question 2: How frequently do the NBCTs and NBC-Cs report engaging in leadership responsibilities as identified in the TLMS?

Figure 3 displays how frequently each group of teachers reported engaging in leadership functions for each of the seven TLMS domains. In the survey, both groups of teachers were asked to respond to the 37 individual function statements. To answer this question and to best present these findings we combined responses from each of the functions into their corresponding domain and converted a composite percentage for how often teachers reported engaging in each leadership function. The data below are represented using the seven domains.

For Domain 1, NBCTs and NBC-C reported similar frequencies, with both groups engaging in functions that contribute to a collaborative culture nearly every day (NBCTs = 35%) and at least once a week (NBC-Cs = 34%).





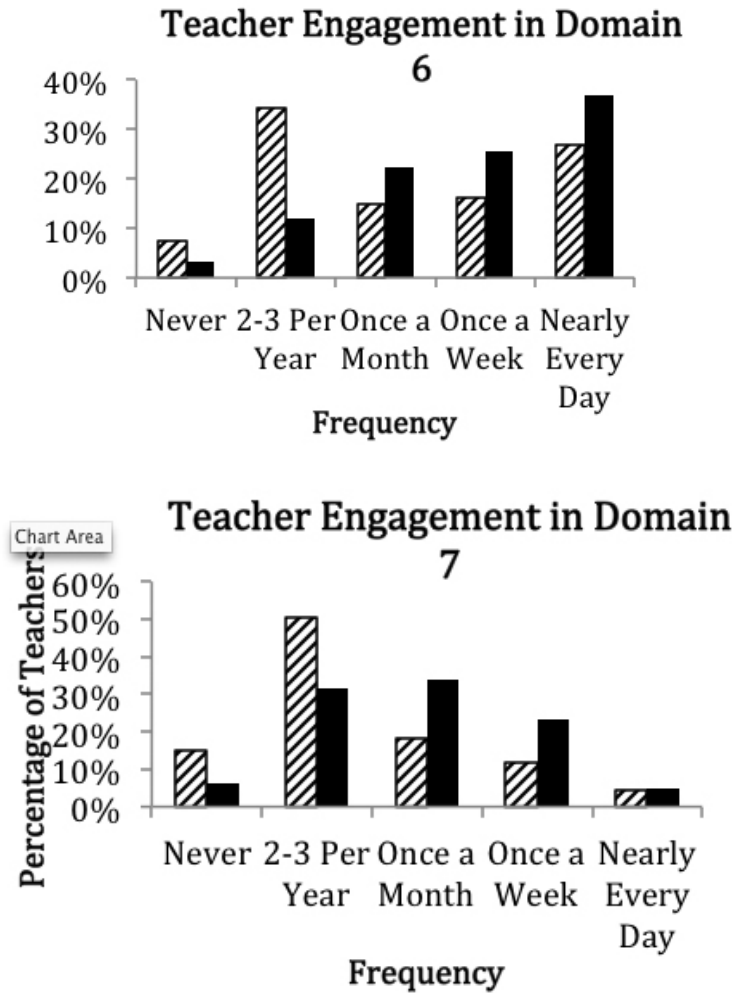


Figure 3. Percentage of NBCTs and NBC-Cs who reported engaging in leadership activities by frequency.

Both groups also were similarly engaged in accessing and using research (Domain 2) with 34% of the NBC-Ts and 36% NBC-Cs indicating engagement with these responsibilities at least once a week. Domain 3, which focuses on professional learning, was reported to most frequently to occur about 2-3 times a year for the NBCTs (35%) and about once a month (29%) for the NBC-Cs. When reporting on instructional improvements (Domain 4), NBCTs most frequently reported engagement at least once a week (28%) while the NBC-C reported most frequently reported about once a month (31%). Domain 5, using assessments and data, was most frequently reported to occur about 2-3 times a year by the NBCTs (28%) and about once a month (34%) for the NBC-Cs. In Domain 6, which focuses on outreach to families and communities, was reported by 34% of NBCTs to take place about 2-3 times a year whereas 37%

NBC-Cs reported engagement in these responsibilities nearly every day. Last when reporting on, Domain 7, advocacy for students and the profession, 51% NBCTs reported involvement about 2-3 times a year whereas the NBC-C about once a month (34%). The highest percentage of never responses was seen on 1) Domain 7, Advocacy for the NBCTs and (15%) and 2) Domain 3, Professional learning for the NBC-C (15%).

Research Question 3: Are there any differences between the NBCTs and NBC-Cs' leadership responsibilities as identified in the TLMS?

Mann-Whitney U Tests were used to test for differences in how likely NBCTs versus NBC-C were to engage in each of the 37 leadership functions. Statistically significant differences were found between groups in 5 functions ($\alpha = .05$, see Table 2 for test statistics and cell values). NBC-Cs were more likely to report engaging in higher frequencies of the following functions than were NBCTs:

- 6c. Facilitates colleagues' self-examination of their own understandings of community culture and diversity and how they can develop culturally responsive strategies to enrich the educational experiences of students and achieve high levels of learning for all students;
- 6d. Develops a shared understanding among colleagues of the diverse educational needs of families and the community;
- 6e. Collaborates with families, communities, and colleagues to develop comprehensive strategies to address the diverse educational needs of families and the community'
- 7a. Shares information with colleagues within and/or beyond the district regarding how local, state, and national trends and policies and impact classroom practices and expectations for student learning;
- 7c. Collaborates with colleagues to select appropriate opportunities to advocate for the rights and/or needs of students, to secure additional resources within the building or district that support student learning, and to communicate effectively with targeted audiences such as parents and community members.

(TLEC, 2011, p. 19-20)

TABLE 2
Cell Percentages and Frequencies of How Often Teachers Report Engaging in Leadership Functions

Function____	_Group_	Responses					<i>p</i>
		Never	About 2-3 Times per _year_	About once a month	At least once a week	Nearly every _day_	
Function 6_c <i>U</i> = 277.00	NBCT	5 71%	13 81%	3 27%	8 53%	3 38%	.042
	NBC-C	2 29%	3 19%	8 73%	7 47%	5 63%	
Function 6_d <i>U</i> = 273.50	NBCT	3 100%	12 80%	6 40%	4 40%	7 50%	.036
	NBC-C	0 0%	3 20%	9 60%	6 60%	7 50%	
Function 6_e <i>U</i> = 244.50	NBCT	2 67%	14 78%	8 62%	3 33%	5 36%	.010
	NBC-C	1 33%	4 22%	5 38%	6 67%	9 64%	
Function 7_a <i>U</i> = 240.50	NBCT	7 78%	15 68%	8 47%	2 22%	0 N/A	.007
	NBC-C	2 22%	7 32%	9 53%	7 78%	0 N/A	
Function 7_c <i>U</i> = 279.00	NBCT	4 80%	15 75%	5 33%	5 42%	3 60%	.043
	NBC-C	1 20%	5 25%	10 67%	7 58%	2 40%	

Note: *p* values presented are for each function using Mann-Whitney U Tests and indicate statistical significance below the .05 level. NBCT *n* = 32, NBC-C *n* = 25.

Discussion

This study focused on the self-perceived leadership roles of primary grade NBCTs and those who were PreK teachers seeking NBC (NBC-Cs). Participants in this study used the TLMS (2011) to identify how often they engaged in a variety of leadership responsibilities. Data analysis and inductive reasoning were used to support the following two conclusions about the leadership practices of the NBCTs and NBC-Cs in this study.

First, NBCTs and NBC-Cs engage in leadership roles within their schools. Descriptive data collected in this study demonstrated similarities between our sample populations of NBCTs and NBC-Cs' demographics with the population being experienced, females with advanced educational degree teaching at primary grade levels (PreK-2). As the data findings of this study's second question found, both populations, NBCTs and NBC-Cs engage, to similar degrees, in the functions of teacher leadership as identified by the TLMS document. Self-reported frequencies ranged from engaging 2-3 times a year to daily for both groups across the seven domains. These findings are similar to Koppich et al. (2006), who found national certified teachers reported being engaged in leadership responsibilities before becoming certified and Freund et al. (2005) who found NBCTs do assume leadership roles in their schools.

The second conclusion drawn from this study is that NBCTs and NBC-C engage in functions of teacher leadership at varying levels. When analyzing the results of this study's third research question, we found statistically significant differences between five functions embedded within two domains: Improving Outreach to Families and Communities (Domain 6) and Advocating for Students and the Profession (Domain 7). The NBC-C (PreK teachers) engaged in all five functions with greater frequencies than the NBCTs (K-2 teachers). These differences may be related to the nature of the job of a PreK teacher, a position historically engaged with ongoing parent and community communication (Domain 6). Further, in this state, PreK teachers are trained in and required to complete the Early Childhood Environment Rating Scales (ECERS-R; Harms, et al, 2004) which is an assessment instrument for early childhood and childcare program quality. Prekindergarten teachers statewide are trained in the tool and required to complete the inventory every 2-3 years. The assessment includes a multiple item "Provisions on Parents" component with a strong focus on parent communication and involvement. Parent and community engagement is a regular part of the PreK teachers' focus. As for the findings anchored in advocacy (Domain 7), this state is one of few with Universal Pre-Kindergarten (UPK) initiatives and the policies around UPK in the state situate the NBC-C (PreK teachers) to be more engaged in advocating for the importance for all children to have access and involvement in early childhood education.

Limitations

The limitations of this study relate to its methodology. Both groups of participants were asked to self-report their engagement with the TLMS functions. Self-reporting in itself can be skewed as individuals tend to report their activities

higher than they really are. Another limitation of the current study is its use of convenience sampling. Further, the total number of participants in both groups was small and participants were not randomly selected, thus limiting generalizability of the findings beyond the NBCTs and NBC-Cs not sampled here.

Implications

The implications of this research related to distributed leadership theory (Spillane, 2005) are important at all levels of education. Practicing teachers seeking advanced certifications (e.g., NBC or principal certification) should seek opportunities to engage in and promote a distributed leadership approach within their school culture. The TLMS document may serve as an anchor to guide teachers' collaborative actions around its seven domains. Engaging in such learning communities support a distributed approach to leadership in which teachers are able to collaborate with and lead their colleagues. As teachers interact in learning communities, they are likely to learn more, make positive changes to their pedagogy, and continue to grow as professionals (DuFour, DuFour, & Eaker, 2008; Learning Forward, 2015).

National Board Certification support providers need to recognize that those seeking NBC may already be engaging in leadership activities within their schools. Support providers should mentor teachers working on national certification in understanding the relationship between how NBTPS Core Proposition 5 aligns with the distributed leadership theory (Spillane, 2005). By supporting such beliefs in importance of distributed leaderships, those who are NBCTs and those seeking certification may be more equipped to participate in leadership responsibilities and lead learning communities within their school communities (See Figure 1). Principal certification programs also must understand and embrace a distributed leadership model. It is through these advanced certification programs that those studying to become principals can learn to move from a traditional top-down hierarchical management style and, instead, adopt a shared vision of leadership.

NBC-Cs are also an important cog in the distributed leadership wheel. NBC-Cs will need content knowledge on the distributed leadership theory and current models demonstrating how this approach is successfully implemented within schools. Higher education faculty members must expose and explain distributed leadership to preservice teachers who have not yet entered the field. In addition to coursework, faculty members should be able to identify exemplary examples within partnering schools and create field experience for preservice teachers to observe and engage in these schools.

The implications of this research, and previous research reporting teacher engagement in leadership roles and responsibility, point to the importance of various stakeholders supporting distributed leadership implementation in schools. Teacher education undergraduate and graduate programs play an important role in preparing those entering the field as beginning teachers and those seeking advanced certification, such as principal certification or master's degrees in their content area. School district administrators and decision makers are also critical in shaping opportunities for job-embedded leadership opportunities, both formal and informal. In addition, the accrediting body of National Board Professional Teaching Standards also plays an important role in identifying and embracing a distributed leadership model as it sets its expectations and criteria for this nationally recognized certification.

References

- Barth, R. (2013). The time is ripe (again). *Educational Leadership*, 71(2), 10-16.
- Camburn, E., Kimball, S., & Lowenhaupt, R. (2008). Going to scale with teacher leadership: Lessons learned from a districtwide literacy coach initiative. In Mangin, M.M. & Stoelinga, S.R. (Eds.). *Effective teacher leadership: Using research to inform and reform* (pp. 120-143). New York City, NY: Teachers College Press.
- Coskie, T. & Place, N. (2008). The National Board certification process as professional development: The potential for changed literacy practice. *Teaching and Teacher Education* 24 (7). 1893-1906.
- Danielson, C. (2007). The many faces of leadership. *Educational Leadership*, 65(1), 14-19.
- Dozier, T. (2007). Turning good teachers into great leaders. *Educational Leadership*. 65(1), 54-59.
- DuFour, R., DuFour, R. & Eaker, R. (2008). *Revisiting professional learning communities at work: New insights for improving schools*. Bloomington, IL: Solution Tree.
- Freund, M., Russell, V., & Kavulic, C. (2005). *A study of the role of mentoring in achieving certification by the National Board for Professional Teaching Standards*. Washington, D.C.: George Washington University Graduate School of Education and Human Development.
- Goddard, Y., Goddard, R., & Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record*, 109(4), 877-896.
- Harms, T., Clifford, R., & Cryer, D. (2004). *Early Childhood Environment Rating Scale-Revised*. New York City, NY: Teachers College Press. Institute for Educational Leadership (IEL; 2001). *Leadership for student learning: Redefining the teacher as leader*. Washington, DC: Author.
- Katzenmeyer, M. & Moller, G. (2009). *Awaking the sleeping giant: Helping teachers develop as leaders* (3rd edition). Thousand Oaks, CA: Corwin.

- Koppich, J., Humphrey, D., & Hough, H. (2006). Making use of what teacher know and can do: Policy, practice, and National Board Certification. *Education Policy Analysis Archives*, 15 (7), 1-27.
- Learning Forward. (2015). *Standards for professional learning: Learning communities*. Retrieved from <http://learningforward.org/standards/learning-communities#.VzURiT-lx4M>
- MetLife Survey of the America Teacher: Challenges for School Leadership* (2012). Dallas, TX: MetLife.
- National Board for Professional Teaching Standards (NBPTS, 2002). *What teachers should know and be able to do*. Retrieved from http://www.nbpts.org/sites/default/files/what_teachers_should_know.pdf
- National Board for Professional Teaching Standards (NBPTS, 2001). Leading from the classroom: Highlights from the 2001 NBPTS National Board Teacher Leadership Survey. Special section of *Accomplished Teacher Magazine*. Arlington, VA: Author, 2-5.
- Silva, D. Y., Gimbert, B., & Nolan, J. (2000). Sliding the doors: Locking and unlocking possibilities for teacher leadership. *Teachers College Record*, 102, 779-804.
- Sato, M., Wei, R., & Darling-Hammond, L. (2008). Improving teachers' assessment practices through professional development: The case of National Board Certification. *American Education Research Journal* (45) 3. 669-700.
- Spillane, J. (2005). Distributed leadership. *The Educational Forum*. 69 (2), 143-150.
- Teacher Leadership Exploratory Consortium. (2011). Teacher leader model standards. Retrieved from <http://www.teacherleaderstandards.org/>.
- Yankelovich Partners (2001). *Leading from the classroom: Highlights from the 2001 NBPTS Board Certified teacher leadership survey*. Chapel Hill, N.C.:
- Yankelovich Associates. Retrieved from [http://www.nbpts.org/UserFiles/File/leading_from_the_classroom\(1\).pdf](http://www.nbpts.org/UserFiles/File/leading_from_the_classroom(1).pdf)
- York-Barr, J. & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research*, 74(3), 255-31

INVESTIGATING KOREAN UNIVERSITY STUDENTS' BELIEFS ABOUT LANGUAGE LEARNING: MOVING FROM AN EFL CONTEXT TO AN ESL CONTEXT

Kay Hong-Nam

Texas A&M University-Commerce

Susan Szabo

Texas A&M University-Commerce

Abstract

This study investigated Korean students' beliefs about their language learning as they came to the U.S. and changed their learning from an English as a Foreign Language (EFL) to an English as a Second Language (ESL) context. The study found the Korean students had more positive beliefs about language learning, reported significant changes in opinions about use of learning and communication strategies, and had multiple changes in their beliefs after spending one semester in an ESL context at a university in the United States.

Learners' beliefs are closely related to their social context. In terms of language learning, research has found that learners' beliefs about language learning can be influenced by their previous language learning experiences and cultural background (Al-Osami & Wedell, 2014; Chamberlain, 2005; Horwitz, 1999). For instance, English language learners (ELLs) in a social context where English is being taught as a foreign language (EFL) may have beliefs about English language learning which differs from those of learners in a context where English is the native language, providing an English as a Second Language (ESL) context.

Thus, beliefs held by language learners vary according to their social and learning environments and these beliefs about language learning help or hinder their ability to acquire the new language better. This rationale provided an impetus for investigating learners' language learning behaviors (Hong-Nam, 2006; Zarei & Rahmani, 2015). As Christison and Krahnke (1986) stressed, "studies of learner beliefs and attitudes are valuable sources of insight into language learning" (p.78). Research on raising awareness about learners' beliefs about language learning is an important step toward understanding learners' language learning behaviors and strategy use.

Purpose of the Study

While a number of research studies are available investigating beliefs about language learning of language learners from different learning context (e.g., EFL, ESL) and with different educational backgrounds, language and sociocultural background, little research has been done on the same students when they move from being an EFL student to an ESL student. Thus, this study examined Korean university students' beliefs about language learning and compared their beliefs as their learning contexts changed from EFL to ESL. The current study examined the following research questions:

1. What are the beliefs of Korean university students concerning English language learning in an EFL setting?
2. What are the beliefs of the same group of Korean university students concerning English language learning in an ESL setting?
3. Are there any changes in beliefs about English language learning of the Korean university students as the learning contexts changed from an EFL to ESL settings?

Literature Review

Beliefs about Language Learning

Beliefs about language learning refer to learners' notions, perceived ideas, insights, concepts, opinions, representations, or assumption of the nature of language or language learning (Bernat & Gvozdenko, 2005; Holec, 1981; Horwitz, 1987; Kern, 1995). It is generally agreed that each individual language learner holds different beliefs about how language is learned. And, these different individual beliefs about language learning may consciously or unconsciously influence learners' approaches to or behaviors in language learning.

Numerous research on learners' beliefs about language learning have been conducted over the past decades in order to understand various learners' approaches to language learning to plan appropriate language instruction (Al-Osami & Wedell, 2015; Azar & Saeidi, 2013; Bernat & Gvozdenko, 2005; Diab, 2000; Holec, 1981; Horwitz, 1987; Tumposky, 1991). Several conclusions developed because of these findings. One, individual language learners hold various beliefs about language learning and that similarities and differences in beliefs among learner groups exist (Bernat & Gvozdenko, 2005; Hong-Nam, 2006; Horwitz, 1987; Kern, 1995; Saeb & Samani, 2013; Zhong, 2014). Two, language learners had explicit beliefs or attitude toward language learning and their beliefs were usually influenced by their prior experiences, education background, learning contexts, language, political or sociocultural background (Diab, 2000; Holec, 1981; Horwitz, 1987; Mohebi & Khodadady, 2011; Tumposky, 1991). Three, students' beliefs and attitudes about language learning were not easily modified through teacher influence (Ganjabi, 2011; Kern, 1995).

Korean Students Beliefs about Language Learning

Several research studies have investigated beliefs of Korean students regarding language learning over the decades, which share the same L1 (first language) language background (Korean), ethnicity, culture, and educational environment with the participants in the current study (Hong-Nam, 2006; Kim, 2001; Kim-Yoon, 2000; Park, 1995; Truitt, 1995). For instance, Park (1995) investigated Korean university students' beliefs about language learning and reported that although Korean students showed a strong desire to have English-speaking friends and to learn to speak English, the students felt timid in speaking English and did not enjoy speaking English with other people. The Korean students in Park's study generally disagreed about the importance of learning grammar despite the grammar-translations-oriented teaching approach across the schools in Korea.

A study conducted by Truitt (1995) also investigated beliefs about language learning and foreign language anxiety of Korean university students learning English in an EFL context. The study found that participating Korean students felt the importance of speaking English well, reporting high value of English proficiency. Truitt concluded that in spite of their strong desire to learn and speak English, lack of confidence about their language learning abilities hindered their abilities to put their beliefs into practice.

Kim-Yoon (2000) also investigated beliefs of Korean high school students, university students, and adults learning English in Korea, and found that the majority of the Korean students considered English to be a difficult language to learn. About half of the university students and adult learners believed that it was

easier to learn reading and writing than speaking and listening in English, while less than half of high school students disagreed. The findings indicated that the high school students endorsed strongly structured learning, whereas the university students reported greater confidence in speaking, and the adult EFL learners held strong opinions about foreign language aptitude. Kim (2001) also examined beliefs about language learning of Korean university students learning English in Korea. The study found high mean scores in motivational beliefs and low mean scores in self-efficacy. In a comparative study of beliefs about language learning, the two groups of participants (monolingual Korean and bilingual Korean-Chinese) reported holding some similar beliefs (Hong-Nam, 2006). For example, in motivation and the nature of learning English, students from both groups showed strong beliefs on instructional reasons for learning English. While similar beliefs about language learning were reported, some conflicting beliefs were also observed. For instance, more monolingual Korean students felt timid speaking English with native speakers or other people and did not enjoy practicing English with others. The researcher concluded that the differences in beliefs of two groups may be influenced by their learning experiences and socio-cultural learning settings.

The studies of Korean students discussed above have suggested that students who share the same culture, language, and socio-educational settings hold different beliefs about language learning. These differences may be due to other variables, such as their age, learning stage, prior learning experiences, and learning conditions.

Method

Participants

The participants in this study were 101 Korean university students enrolled in at a university in the United States. The participants were selected for the current study because they were enrolled in a specially designed transfer program in which they first attended a university in Korea for one year as freshmen and then transferred to a university in northeast Texas as either a freshmen or sophomore. This unique experience created an intact group of English language learners and provided an opportunity to examine any changes in beliefs about language learning in two specific contexts: their native country and an English speaking country.

The participants were comprised of 58 males (58%) and 43 females (43%). Their age ranged from 19 to 26 years with a mean of 20.2 years. The majority of the participants in this study were freshmen (74) with 27 sophomores, majoring in various disciplines such as Social Science (49), Humanities (12), Engineering (9), and Science (31).

In Korea – The EFL Context

The Korean university students applied to this special academic program that required the students to study in the United States. Once they were accepted, the students attended a large Korean university as freshmen for one year. While in Korea, these freshman students attended intensive English language courses which were taught by native English-speaking instructors. The instructors assessed the language skills of each student and placed them in their developmentally appropriate English classes (Beginning, Intermediate, and Advanced) based on their English proficiency. All courses consisted of 20 hours per week for 16 weeks (spring and fall semester) and 40 hours per week for 8 weeks (all day long in the summer) where they focused on developing all four areas of their English language skills (reading, writing, listening, and speaking).

In addition to taking these intensive English language courses to build their understanding of the English language, the freshman Korean students were also required to take a minimum of seven general college courses which included: College Algebra, Biology, Chemistry, Political Science, Speech, Economics, or American History (21 credit hours). The instructional languages of the courses were both Korean and English and the courses were taught by either native English-speaking instructors or native Korean instructors who were fluent in English and earned their doctorate degree in an English speaking country (e.g., USA, Canada). Finally, all textbooks were written in English and the college courses usually required the students to manage a great amount of reading and assignments every week. Therefore, the participants in the study were exposed to English at least 8-9 hours daily in this EFL academic context.

In the United States – The ESL Context

The students then transferred to a large U.S. university upon the successful completion of the intensive English language first year program and their required general college courses. They were admitted either as freshmen or sophomores depending on the number of credit hours they had completed in Korea. During the first semester at the U.S. university, the students took four to six courses that were either general studies courses or courses that were related to their major.

Instrument

The *Beliefs about Language Learning Inventory* (BALLI, ESL/EFL version, Horwitz, 1987) was used to investigate Korean university students' beliefs about their language learning. The BALLI used for this study contained 34 items and assessed learners' beliefs in five areas: 1) Foreign Language Aptitude (9 items);

2) Difficulty of Language Learning (6 items); 3) Nature of Language Learning (6 items);

4) Learning and Communication Strategies (8 items); and 5) Motivation and Expectations (5 items). In this study, the BALLI contains 35 items, as one item was added to the original BALLI which asked a question about the role of memorization in language learning (Yang, 1999).

Thirty-two items on the BALLI were scored using a five-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). Two items (4 and 15) were scored with different scales, as they asked about the difficulty of learning the English language and the amount of time needed to learn English. Thus, item 4 was scored using a Likert-scale ranging from 1 (very difficult) to 5 (very easy) while item 15 went from A (less than a year) to E (you can't learn a language in one hour a day). The BALLI does not produce a composite score. Instead it provides descriptive opinions about the teacher and students views of language learning.

The BALLI is to date the most widely used tool for measuring what learners think about language learning and it has been adapted for numerous studies to explore beliefs of language learners. The previous research studies reported reliability on the BALLI ESL/EFL version, ranging from .61 to .69 using Cronbach's alpha (e.g., Kim-Yoon, 2000; Park, 1995; Truitt, 1995, Yang, 1999). The current study found a higher reliability on the BALLI: 0.74 (EFL Context) and 0.81 (ESL Context).

Data Collection and Analysis

The current study employed a pre/post-survey approach using the BALLI. The questionnaire was given to the participants twice. The first time the BALLI was given to the participant was at the end of the second semester while they were still in Korea and in their EFL context by the instructors of the Intensive English language classes. The second time the BALLI was given to the participants was at the end of their first semester while they were at the U.S. university and in their ESL context by instructors of the freshman survival course, which was a required course. This course was designed to help students develop skills, knowledge and behaviors to create confident, self-sufficient learners.

Several statistical techniques were employed for data analyses. Descriptive statistics were calculated for summarizing demographic information and describing students' overall beliefs. A Paired *t*-test was used for exploring statistically significant changes in the participants' beliefs between the pre- and post-survey. A Cronbach alpha was conducted to determine the internal reliability of the BALLI for this study.

Results

The results of the BALLI components are discussed below and organized by component. The five components were compared from pre (EFL experience) to post (ESL experience) to see if any changes occurred.

Foreign Language Aptitude

As shown in Table 1, the mean scores for all nine items in this theme changed. However, most of the changes were only by a few tenths of a point. Thus, there were only two items that had any statistically significant changes.

First, this was seen in the Korean university students' opinions of their foreign language aptitude within this EFL/ESL experience. For instance, 46 students (46%) while still in Korea and in their EFL context neither agreed nor disagreed that they have a special ability for learning foreign language. However, 29 students (29%) agreed or strongly agreed that they had a special ability for learning a foreign language (Item 16) after spending a semester in the U.S. ($t = -3.07, p = 0.002$) while only 17% agreed or strongly agreed in the EFL context. Second, more students believed that women were better language learners than men ($t = -2.42, p = 0.016$) although the majority of the participants still disagreed or strongly disagreed with the statement (Item 19, Pre: 55%, Post: 46%).

Changes in other beliefs were also reported although they were not statistically significant. For example, more students agreed or strongly agreed that people who already speak a foreign language can learn another language more easily (Item 10, Pre: 55%, Post: 64%). However, the majority of Korean students disagreed or strongly disagreed that people with good mathematics or science skills are not as good at learning foreign languages (Item 11, Pre: 62%, Post: 53%), indicating math or science people can be good language learners, although less students disagreed with the beliefs after spending a semester in the U.S. When asked if everyone could learn to speak a foreign language, the majority of Korean university students agreed with the statement although the percentage decreased after a semester in the U.S. (Item 33, Pre: 71%, Post: 65%).

Difficulty of Language Learning

As shown in Table 2, the mean scores for all six items changed. However, only one change was statistically significant (Item 5). While in their EFL context, the Korean students believed that they would learn to speak English very well but when the students moved to their ESL context this belief decreased (Item 5, Pre: 89%, Post: 76%, $t = 2.61, p = 0.009$).

TABLE 1 Foreign Language Aptitude

Items		1*	2	3	4	5	M	SD	t	Sig
1. It is easier for children than adults to learn a foreign language.	Pre	2.0†	7.9	20.8	40.6	28.7	3.86	0.98	0.20	0.838
	Post	4.0	5.0	28.7	28.7	33.7	3.83	1.16		
2. Some people have a special ability for learning foreign languages.	Pre	4.0	9.9	16.8	39.6	29.7	3.81	1.19	0.20	0.841
	Post	5.0	3.0	25.7	41.6	24.8	3.78	1.03		
6. People from my country are good at learning foreign languages.	Pre	4.0	8.9	34.7	27.7	24.8	3.60	1.16	0.07	0.945
	Post	1.0	9.9	36.6	33.7	18.1	3.59	0.88		
10. It is easier for someone who already speaks a foreign language to learn another one.	Pre	6.9	7.9	29.7	29.7	25.7	3.59	1.34	-0.64	0.521
	Post	5.0	5.9	24.8	43.6	20.8	3.69	1.05		
11. People who are good at mathematics or science are not good at learning foreign languages.	Pre	39.6	22.8	22.8	5.9	8.9	2.22	1.63	-1.48	0.139
	Post	25.7	27.7	24.8	16.8	5.0	2.48	1.41		
16. I have a special ability for learning foreign languages.	Pre	8.9	27.7	46.5	9.9	6.9	2.78	0.97	-3.07	0.002**
	Post	5.0	9.9	56.4	17.8	10.9	3.19	0.88		
19. Women are better than men at learning foreign languages.	Pre	36.6	18.8	30.7	10.9	3.0	2.25	1.33	-2.42	0.016***
	Post	24.8	20.8	26.7	18.8	8.9	2.66	1.65		
30. People who speak more than one language are very intelligent.	Pre	7.9	7.9	33.7	30.7	19.8	3.47	1.29	0.64	0.948
	Post	4.0	12.9	34.7	30.7	17.8	3.46	1.11		
33. Everyone can learn to speak a foreign language.	Pre	2.0	4.0	22.8	25.7	45.5	4.09	1.02	0.49	0.623
	Post	1.0	4.0	29.7	22.8	42.6	4.02	0.98		

Note: * 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree
 ** $p < 0.01$ *** $p < 0.05$ † The percentages (%) has been rounded to the nearest tenth.

Other changes in beliefs were not significant but interesting. When asked the degree of difficulty of learning English (Item 4), even though the Korean student agreed that English was a difficult language to learn while they were in their EFL context more thought English was difficult after their first semester in the United States in their ESL context (Item 4, Pre: 32%, Post: 41%). In addition, less students agreed when asked if speaking a foreign language was easier than understanding it (Item 25, Pre: 36%, Post: 31%) and more students agreed reading and writing are easier than speaking and understanding (Item 34, Pre: 34%, Post: 37)

Nature of Language Learning

As shown in Table 3, which presents beliefs about the nature of language learning, all six items changed their mean scores, either up or down. However, only one, the results of the students' opinions about the importance of translating in language learning (Item 28) were statistically significant. While in their EFL context, a large number of Korean students neither disagreed nor agreed about the importance of translating (Pre: 38%, Post: 43%), but after a semester in the United States and in their ESL context more students felt that translating English to their native language or vice versa played an important role in English learning (Pre: 27%, Post: 32%, $t = -1.70$, $p = 0.093$).

Again, other changes were interesting but not significant. For instance, even though the scores went down, the majority of Korean university students still agreed and strongly agreed that it is best to learn English in an English-speaking country (Item 12, Pre: 71%, Post: 66%). More than half of the participants consistently felt learning vocabulary was important (Item 17, Pre: 58%, Post: 57%), while they felt learning grammar was less important in language learning (Item 23, Pre: 36%, Post: 31%). In addition, more than half of the participants consistently supported that learning a foreign language was different than learning other academic subjects (Item 27, Pre: 54%, Post: 52%). Lastly, more than half of the students agreed or strongly agreed that that language learning involved a lot of memorization (Item 35, Pre: 60%, Post: 53%) although this belief went down after spending a semester in the U.S.

Learning and Communication Strategies

As seen in Table 4, all eight mean scores changed, either up or down regarding learning and communication strategies. This area of the BALLI had the largest number of items that showed the changes to be statistically significant. The Korean university students reported significant changes in three of their opinions

TABLE 2 Difficulty of Language Learning

Item		1*	2	3	4	5	M	SD	t	Sig
3. Some languages are easier to learn than others.	Pre	6.9†	8.9	28.7	31.7	23.8	3.56	1.33	-1.10	0.274
	Post	4.0	5.9	27.7	37.6	24.8	3.73	1.06		
4. English is: (1) a very difficult language, (2) a difficult language, (3) a language of medium difficulty, (4) an easy language, (5) a very easy language.	Pre	3.0	31.7	43.6	15.8	5.9	2.90	0.83	1.32	0.187
	Post	1.0	40.6	44.6	10.9	3.0	2.74	0.61		
5. I believe that I will learn to speak English very well.	Pre	0.0	1.0	9.9	30.7	58.4	4.47	0.51	2.61	0.009**
	Post	0.0	2.0	21.8	32.7	43.6	4.18	0.71		
15. If someone spent one hour a day learning a language, how long would it take them to speak the language very well? (1) less than a year, (2) 1-2 years, (3) 3-5 years, (4) 5-10 years, (5) you can't learn a language in a day.	Pre	7.9	23.8	39.6	11.9	16.8	3.06	1.36	0.61	0.542
	Post	9.9	25.7	33.7	19.8	10.9	2.96	1.30		
25. It is easier to speak than understand a foreign language.	Pre	4.0	26.7	33.7	15.8	19.8	3.21	1.35	0.98	0.328
	Post	8.9	21.8	37.6	18.8	12.9	3.05	1.29		
34. It is easier to read and write English than to speak and understand it.	Pre	10.9	18.8	36.6	16.8	16.8	3.10	1.47	-0.42	0.678
	Post	11.9	9.9	41.6	22.8	13.9	3.17	1.34		

Note: * 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree ** $p < 0.01$ † The percentages (%) has been rounded to the nearest tenth.

TABLE 3 The Nature of Language Learning

Items		1*	2	3	4	5	M	SD	t	Sig
8. It is important to know about English-speaking cultures in order to speak English.	Pre	1.0†	5.0	16.8	27.7	49.5	4.20	0.92	1.55	0.122
	Post	1.0	7.9	14.9	43.6	32.7	3.99	0.89		
12. It is best to learn English in an English-speaking country.	Pre	2.0	3.0	23.8	17.8	53.5	4.18	1.05	1.37	0.172
	Post	2.0	5.0	26.7	25.7	40.6	3.98	1.06		
17. The most important part of learning a foreign language is learning vocabulary words.	Pre	3.0	6.9	31.7	35.6	22.8	3.68	1.00	-0.22	0.829
	Post	2.0	5.0	36.6	32.7	23.8	3.71	0.91		
23. The most important part of learning a foreign language is learning the grammar.	Pre	14.9	20.8	38.6	21.8	4.0	2.79	1.15	-1.26	0.210
	Post	8.9	21.8	39.6	21.8	7.9	2.98	1.12		
27. Learning a foreign language is different than learning other academic subjects.	Pre	4.0	13.9	28.7	24.8	28.7	3.60	1.34	0.55	0.585
	Post	5.9	11.9	30.7	27.7	23.8	3.51	1.33		
28. The most important part of learning English is learning how to translate from my language or from my native language to English	Pre	12.9	22.8	37.6	21.8	5.0	2.83	1.14	-1.70	0.093**
	Post	8.9	16.8	42.6	19.8	11.9	3.09	1.20		
35. Language learning involves a lot of memorization.‡	Pre	4.0	8.9	26.7	35.6	24.8	3.68	1.14	0.49	0.628
	Post	1.0	9.9	36.6	31.7	20.8	3.61	0.92		

Note: * 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree
 ** $p < 0.1$ ‡ Item 35 was not the original BALLI item (Horwitz, 1987), but it was adopted from Yang's study (1999). † The percentages (%) has been rounded to the nearest tenth.

TABLE 4 Learning and Communication Strategies

Items		1*	2	3	4	5	M	SD	t	Sig
7. It is important to speak English with an excellent pronunciation.	Pre	1.0†	3.0	31.7	31.7	32.7	3.92	0.85	0.60	0.550
	Post	1.0	6.9	27.7	35.6	28.7	3.84	0.92		
9. You shouldn't say anything in English until you can say it correctly.	Pre	40.6	24.8	22.8	5.0	6.9	2.13	1.45	-2.41	0.016***
	Post	24.8	25.7	24.8	20.8	4.0	2.54	1.41		
13. I enjoy practicing English with the native speakers of English I meet.	Pre	0.0	8.9	27.7	24.8	38.6	3.93	1.03	-0.15	1.653
	Post	1.0	4.0	25.7	37.6	31.7	3.95	0.83		
14. It's o.k. to guess if you don't know a word in English.	Pre	0.0	4.0	6.9	24.8	64.4	4.50	0.63	2.89	0.004**
	Post	0.0	1.0	22.8	34.7	31.7	4.17	0.66		
18. It is important to repeat and practice a lot.	Pre	1.0	0.0	21.8	28.7	48.5	4.24	0.74	2.38	0.018***
	Post	5.0	4.0	26.7	24.8	39.6	3.90	1.27		
21. I feel timid speaking English with other people.	Pre	19.8	20.8	25.7	21.8	11.9	2.85	1.69	-0.91	1.652
	Post	11.9	20.8	32.7	23.8	10.9	3.01	0.37		
22. If beginning students are permitted to make errors in English, it will be difficult for them to speak correctly later on.	Pre	16.8	21.8	33.7	15.8	11.9	2.84	1.52	-0.06	0.952
	Post	12.9	25.7	30.7	24.8	5.9	2.85	1.24		
26. It is important to practice with cassettes or tapes	Pre	5.9	8.9	39.6	28.7	16.8	3.42	1.12	0.34	0.736
	Post	4.0	14.9	35.6	31.7	13.9	3.37	1.06		

Note: * 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree
 ** $p < 0.01$ *** $p < 0.05$ † The percentages (%) has been rounded to the nearest tenth.

about learning strategies, as they rated them higher in their EFL context than they did in their ESL context.

First, the mean score of Item 9 statistically changed (Pre: $M = 2.14$, Post: $M = 2.54$) as Korean students changed their language leaning context from EFL to ESL. While in their EFL context they felt they should not say anything until they could say it in English correctly but when they changed to their ESL context less felt it was important to say it correctly, indicating that they felt more accepting of making mistakes when speaking English ($t = -2.41$, $p = 0.016$). Second, the mean score of Item 14 statistically went down (Pre: $M = 4.50$, Post: $M = 4.17$) as Korean students in their EFL context felt it was okay to guess if they didn't know the right word but when they moved to the ESL context, less felt it was okay even though a large number of students (32%) still strongly agreed that it was still okay ($t = 2.89$, $p = 0.004$). Third, the mean score of Item 18 (Pre: $M = 4.24$, Post: $M = 3.90$) statistically went down as Korean students in their EFL context felt it was important to repeat and practice a great deal but when they moved to their ESL context less students thought this idea was as important ($t = 2.38$, $p = 0.016$).

The participants reported slight changes in other ideas on learning strategies after they had been in the U.S. for a semester. For instance, the majority of Korean students still believed that it is important to speak English with excellent pronunciation (Item 7, Pre: 64%, Post: 64%) and to practice English with audio aids (Item 26, Pre: 46%, Post: 46%). In addition, more Korean students reported that they didn't feel timid speaking English with other people (Item 21, Pre: 34%, Post: 35%) and enjoy practicing English with the native speakers of English (Item 13, Pre: 63%, Post: 69%).

Motivation and Expectation

As seen in Table 5, all five items changed in the mean scores from pre- to posttest, but only the mean change for one item (Item 31) was statically significant.as the large number of the Korean students while in their EFL context reported they desired to learn to speak English well but when the Korean students changed to their ESL context the percentage was reduced by ten percent (Pre: 86%, Post: 76%) ($t = 2.37$, $p = 0.02$) although the majority of them still wanted to speaking English well.

Some of the interesting changes that were not statistically significant showed that a large number of participants strongly believed that people in their country felt that it was important to speak English well (Item 20, Pre: 79%, Post: 68%) and they would have better opportunities for a good job if they learned to speak English well (Item 29, Pre: 73%, Post: 68%). Additionally, many agreed or strongly agreed that they want to have friends who are native speakers of

TABLE 5 Motivation and Expectations

Items		1*	2	3	4	5	M	SD	t	Sig
20. People in my country feel that it is important to speak English.	Pre	1.0†	2.0	17.8	20.8	58.4	4.34	0.83	1.94	0.054
	Post	0.0	5.9	25.7	22.8	45.5	4.08	0.95		
24. I would like to learn English so that I can get to know native speakers of English better and their cultures.	Pre	3.0	18.8	25.7	25.7	26.7	3.55	1.35	1.19	0.237
	Post	7.9	15.8	31.7	22.8	21.8	3.35	1.47		
29. If I learn English very well, I will have better opportunities for a good job.	Pre	2.0	1.0	23.8	21.8	51.5	4.20	0.94	1.09	0.279
	Post	1.0	4.0	26.7	25.7	42.6	4.05	0.95		
31. I want to learn to speak English well.	Pre	0.0	2.0	11.9	10.9	75.2	4.59	0.60	2.37	0.020**
	Post	0.0	3.0	20.8	17.8	58.4	4.32	0.82		
32. I would like to have friends who are native speakers of English.	Pre	0.0	5.0	18.8	19.8	56.4	4.28	0.88	1.63	0.104
	Post	1.0	3.0	27.7	25.7	42.6	4.06	0.91		

Note: * 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree
 ** $p < 0.05$ † The percentages (%) has been rounded to the nearest tenth.

English even though this number went down from pre-to post scores (Item 32, Pre: 76%, Post: 68%).

Discussion

This study revealed that the Korean students had a wide variety of beliefs about language learning in their EFL experience which may be shaped by both their culture and their past learning experiences. During their experience in their ESL context, all of their beliefs were impacted, as all the item's mean scores changed. After only one semester in the U.S., some of their beliefs were reinforced but many were not, as less students found these ideas to be important when they were in the U.S. and having to learn how to communicate, get along with and understand

English when it was the dominate language. In addition, the student's beliefs in their EFL experience were still being influenced by the Korean social context but when the students moved to the U.S. their beliefs were impacted by a different social culture. The idea that language learning behaviors are influenced by the environment supports previous research (Al-Osaimi & Wedell, 2015; Christison & Krahnke, 1986; Horwitz, 1987, 1988; Hong-Nam, 2006),

Pre- to post scores on the BALLI revealed changes in all five areas. When considering *Aptitude for Language Learning*, over half of the Korean students believed that some people may have a gift for learning foreign language (Item 2), as the mean score stayed relatively the same. In addition, the number of Korean students who felt they may have a special ability to learn a foreign language (Item 16) increased after they came to the U.S. and attended the university for a semester, as these scores significantly increased from pre-to post scores. Finally, even though they all improved, results showed that many thought it was easier for the female Korean students to learn English than it was for the male Korean student (Item 19), as the mean scores increased significantly and that those students studying in mathematics may have a harder time learning a language (Item 11), as the mean scored increased. These beliefs were most likely formed by comparing themselves to other Korean participants in the group and comparing themselves to their United States classmates, as most only speak one language (Diab, 2000).

When examining the *Difficulty of Language Learning* section, the mean scores increased from pre-to post scores as more students believed that some language were easier to learn than others (Item 3) and more felt that it was easier to read and write English than to speak and understand it (Item 34). These beliefs may have changed due to problems the Korean students faced in the course work Reading the English textbook may have been easier than talking about the ideas from the textbook, as this allowed the ESL learner longer to process the knowledge from one language to another. However, this is the opposite of the way humans learn in their first language, as we learn to listen and speak our first language before we learn to read and write it. But, the most interesting results showed that the Korean students' belief in their ability to speak English well decreased significantly after being in the United States for one semester. This may be due to the fact that the English order of words is different and the pronunciation of English words may be difficult, as stress of syllables changes the pronunciation and even the meaning of words. Thus, they found English to be harder than they expected when in their EFL context, which is supported by previous research (Kim-Yoon, 2000).

Examining the *Nature of Language* more closely, supports the findings in the *Difficulty of Language Learning* section, as the mean scores increased from

pre-to post scores for several important items. After being in the United States for a semester, the Korean students increased their belief that learning the vocabulary words and the grammar was more important than they had originally thought. This finding is the opposite of Park's (1995), as he found learning grammar was not important. Previous research has revealed that language learners found grammar instruction or form-focused language learning helpful in language learning, especially if learners wanted to improve their language skills and develop high levels of proficiency (Ellis, R. 2006; Spin, 2015). The Korean students in this study initially thought that grammar learning was not that beneficial in language learning while in an EFL context. However, after spending a semester in the United States, they felt that grammar played an important role in reading their course materials, writing course assignments, and communicating with instructors and classmate with correct use of grammar.

When looking at the results as a whole in the *Learning and Communication Strategies* section, this too supports the findings in the *Difficulty of Language Learning* section, as the mean scores increased in several areas. First, more students believed that you shouldn't say anything in English until you can say it correctly (Item 9) while less students felt it was okay to guess if you did not know an English word (Item 14). In addition, more Korean students were reluctant or timid when speaking English with other people (Item 21) even though they enjoyed practicing English with native English speakers (Item 13). These findings are supported by previous studies (Park, 1995; Hong-Nam, 2006). This is an interesting finding, as many United States students don't understand the nuances of the English language. In addition, the nuances of word phrases are language specific and vary from culture to culture as well as region to region, so what ESL students would learn depending on where they were in the United States (Horwitz, 1985, 1987).

Finally, these Korean students experienced some lack of *Motivation and Expectation* about the power of speaking English, as all item mean scores decreased after being in the U.S. for one semester. However, the mean scores are still high, as all the items but one were above 4.0. So, even though the mean scores decreased, the Korean students still felt that it is important to speak English well in order to get a better job, which is supported by previous research (Diab, 2000; Hong-Nam, 2006; Park, 1995).

Conclusion

The findings of the current study suggest that language teachers should be aware of learners' beliefs about language learning in order to assist less successful language learners and to maintain motivation for learning language. After

identifying the students' beliefs concerning language learning, teachers should implement practical procedures to overcome erroneous beliefs, such as speaking English without errors and highlight beliefs that facilitate learning, such as guessing, repeating, or practicing with English native speakers.

Although the study was carried out with caution in order to ensure reliability and validity of the study, some limitations should be kept in mind when interpreting the findings. For instance, the current study used a retrospective questionnaire which was designed to self-report about beliefs. The survey may not include all types of beliefs. The study investigated only Korean university students enrolled in a university in a specific region of the United States. Therefore, the sample of populations was limited and cautions should be required when attempting to make generalization of the findings to other group of English language learners. The current study indicates a need for more research that includes qualitative responses via interviews or open-ended questions in order to provide more comprehensive understanding on beliefs of Korean university students. Case study of individuals is also recommended to look at English language learners' beliefs about language learning.

In conclusion, this study provided some insight into perceptual changes of Korean students when learning English as a foreign language in their native country and in the context of learning English in an English speaking country. This finding is somewhat counter intuitive as most people, the Korean students included, have the perception that learning another language in a country where it is the national language is easier. And, even though they perceived that English was harder to learn in the United States than they initially thought, for the most part, they seemed to enjoy their new school and learning experiences.

References

- Al-Osaimi, S. & Wedell, M. (2014). Beliefs about second language learning: The influences of learning context and learning purpose. *Language Learning Journal*, 42(1), 5-24.
- Azar, F. & Saeidi, M. (2013). The relationship between Iranian EFL learners' beliefs about language learning and their use of learning strategies. *English Language Teaching*, 6(11), 167-174.
- Bernat, E. & Gvozdenko, I. (2005). Beliefs about language learning: Current knowledge, pedagogical implications, and new research directions. *Teaching English as a Second or Foreign Language*, 9(1), 1-21.
- Chamberlain, S. (2005). Recognizing and responding to cultural differences in the education of culturally and linguistically diverse learners. *Intervention in School and Clinic*, 40(4), 195-211.
- Christison, M. & Krahnke, K. (1986). Student perceptions of academic language study. *TESOL Quarterly*, 20(1), 61-82.

- Diab, R. (2000). Lebanese students' beliefs about learning English and French: A study of university students in a multilingual context. *Dissertation Abstracts International*, 62(02), 497. (UMI No. 3004253).
- Ellis, R. (2006). Current issues in the teaching of grammar: An SLA perspective. *TESOL Quarterly*, 40(1), 83-106.
- Ganjabi, M. (2011). Effective foreign language teaching: A matter of Iranian students' and teachers' beliefs. *English Language Teaching*, 4(2), 46-54.
- Holec, H. (1981). *Autonomy and foreign language learning*. Oxford: Pergamon Press
- Hong-Nam, K. (2006). Beliefs about language learning and language learning strategy use in an EFL context: A comparison study of monolingual Korean and Bilingual Korean-Chinese university students. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global (3214478).
- Horwitz, E. (1985). Using student beliefs about language learning and teaching in the foreign language methods course. *Foreign Language Annals*, 18(4), 333-340.
- Horwitz, E. (1987). Surveying student beliefs about language learning. In A. Wenden & J. Rubin (Eds.), *Learner Strategies in Language Learning* (pp. 119-129). Englewood Cliffs, NJ: Prentice/Hall International.
- Horwitz, E. (1988). The beliefs about language learning of beginning university foreign language students. *Modern Language Journal*, 72(3), 283-294.
- Horwitz, E. (1999). Cultural and situational influences on foreign language learners' beliefs about language learning: A review of BALLI studies. *System*, 27(4), 557-576.
- Kern, R. (1995). Students' and teachers' beliefs about language learning. *Foreign Language Annals*, 28(1), 71-92.
- Kim, H. (2001). Language learning strategies, learning styles and beliefs about language learning of Korean university students. *Pan-Pacific Association of Applied Linguistics*, 5(1), 31-46.
- Kim-Yoon, H. (2000). Learner beliefs about language learning, motivation and their relationship: A study of EFL learners in Korea. *Dissertation Abstracts International*, 61(08), 3041. (UMI No. 9983257).
- Mohebi, S. & Khodadady, E. (2011). Investigating university students' beliefs about language learning. *RELC Journal: A Journal of Language Teaching and Research*, 42(3), 291-304.
- Park, G. (1995). Language learning strategies and beliefs about language learning of university students learning English in Korea. *Dissertation Abstracts International*, 56/06, 2102. (UMI No. 9534918).
- Saeb, F. & Samani, E. (2013). Language learning strategies and beliefs about language learning in high-school students and students attending English institutes: Are they different? *English Language Teaching*, 6(12), 79-86.
- Sopin, G. (2015). Student's perceptions of grammar teaching and learning in English language classroom in Libya. *Journal of Research & Method in Education*. 5(2), 67-72.
- Truitt, S. (1995). Anxiety and beliefs about language learning: A study of Korean university students learning English. *Dissertation Abstracts International*, 56(06), 2155. (UMI No. 9534977).

- Tumposky, N. (1991). Student beliefs about language learning: A cross-cultural study. *Carleton Papers in Applied Language Studies*, 8(1), 50-65.
- Yang, N. (1999). The relationship between EFL learners' beliefs and learning strategy use. *System*, 27, 515-535.
- Zarei, A. & Rahmani, H. (2015). The relationship between Iranian EFL learners' beliefs about language learning and language learning strategy use. *Journal on English Language Teaching*, 5(1), 1-10.
- Zhong, Q. (Feb. 2014). Understanding changes in Chinese immigrant language learners' beliefs in New Zealand. *TESL-EJ*, 17(4).

CONTENT-AREA READING AND WRITING: A BRIEF HISTORICAL PERSPECTIVE TO INFORM RESEARCH, POLICY, AND TEACHER PREPARATION

Chyllis E. Scott

University of Nevada, Las Vegas

Diane M. Miller

University of Houston-Downtown

Abstract

In order to provide a context for further research on reading and writing in the content areas, the authors present a brief historical overview of the relevant existing work in the fields of content literacy, as well as the connections to disciplinary literacy. Of particular note is how these research trends should impact teacher preparation programs, new researchers' contexts, and cohesive classroom instruction. Additionally, influential legislation such as No Child Left Behind, the National Reading Panel Report, and the Common Core State Standards are addressed.

For over a century, scholars have examined the benefits of integrating reading and writing instruction into content-area classes, carving a path for the implementation of content-area literacy requirements which formally began in the 1970s (Bean, 2002; Biancarosa & Snow, 2006; Hall, 2005; Herber, 1970; Kamil, 2003; Moore, Readence, & Rickelman, 1983; Shanahan & Shanahan, 2008; Simonson, 1995). In recent years, researchers have shifted from distinguishing reading and writing to addressing literacy as a multi-modal practice (Gee, 2014). Historically, however, the researchers within English language arts and reading (known in many settings as ELAR), have affirmed that reading

trumps writing, the “neglected ‘R’ (Goatley, 2012; National Commission on Writing in America’s Schools and Colleges, 2003;).

The second edition of the *Handbook of Research on Teaching the English Language Arts* opens with an applicable history lesson. Squire (2003) tells the story of a relatively new discipline, one that was not even recognized as a major until 1896 at Oxford University. Since ELAR is a discipline that encompasses diverse components—reading skills, literature study, writing, speaking, and listening—the profession’s focus has seen major shifts and controversies over where the emphasis should lie. Beyond the distinct field of ELAR, the incorporation of those components into content-area instruction has also experienced similar shifts.

According to Squire (2003), the push of standardized testing in the 1940s, 50s, and 60s prompted a focus on basic skills. After splintering off from the National Council of Teachers of English (NCTE) amidst frequent debates over skills-based versus experience-oriented instruction, reading teachers formed the International Reading Association (IRA; now known as the International Literacy Association [ILA]) in 1955 (Squire, 2003). However, considering the history of literacy education would be incomplete without considering the politics and policies that influenced it. Accordingly, Ruth (2003) posits that publications such as Rudolf Flesch’s 1955 best seller, *Why Johnny Can’t Read and What You Can Do About It* (Flesch, 1955), and the 1983 report from National Commission on Excellence in Education, *A Nation at Risk: The Imperative for Educational Reform*, set the stage for a focus on reading that eclipsed the burgeoning field of composition studies in the world of government funding. The composition theory and research that blossomed in the 1970s had not reached the level of urgency that reading researchers, authors and theorists had been able to foster.

Before delving more deeply into this discussion, we must first clarify the intent of this paper and address its relevance for content area and disciplinary literacy. We have focused our topic to encompass the history of both reading and writing research, although we recognize the discrepant distributions of such research, as the majority of the literature favors reading (Bean, 2002; Biancarosa, & Snow, 2006; Griffin & Tulbert, 1995; Hall, 2005; Kamil, 2003; NICHD, 2000; Scott, 2013; Shanahan & Shanahan, 2008; Simonson, 1995; Slavin et al., 2008). So our primary purpose is to show how the historical contexts of both reading and writing provide theoretical support for more cohesive thinking. A secondary purpose of this paper is to acknowledge the shift in academia and emerging population of newer academics and researchers. It is critical that the newer researchers in the field who are interested in not only content-area literacy but also in teacher education and teacher preparation be well versed in this historical foundation. These researchers are preparing the next generation of teachers,

and an historical perspective of content-area literacy (e.g., reading and writing) carries significance for all who aim to contribute to the field and prepare new teachers within it. In the following sections, we will discuss the history of content-area reading followed by the history of content-area writing, examining both areas through the lenses of research trends, policy, and the future of teacher preparation.

The Historical Context of Content-Area Reading

Traditionally, literacy scholars have not focused on either teacher preparation or content-area literacy instruction with the same dedicated rigor that has been given to research in basic literacy skills. In 1961, Harvard University and the Carnegie Foundation recommended that preservice teachers (PSTs) be given preparation in reading instruction in all content areas, regardless of the grade level of instruction. Primarily neglected to this point, the argument was made that PSTs warranted additional training in this area because reading skills are essential for success in the secondary grades (Usova, 1978).

In the 1970s, explicit interest regarding instructional reading practices in the content areas arose in response to changes in certification requirements (Bader, 1975). These new teaching prerequisites, established in the early 1970s, required elementary and secondary education majors to take a minimum of one reading methods course (Bader, 1975; Hollingsworth & Teel, 1991; Schleich, 1971; Welle, 1981; Willingham, 2006). Universities responded to the revised requirements by designing reading courses to teach and prepare PSTs to integrate literacy practice within content-area instruction. Therefore, to understand the current status of content-area reading, it is critical to understand the inception and evolution of teaching and learning within content-area reading instruction.

Content-Area Reading over the Past Century

General teacher preparation in literacy instruction provides the context for the more specific emphasis upon content-area literacy. Within content-area literacy research, scholars have delineated their work over the years, choosing to focus upon distinct categories. From the early 1900's, researchers have investigated the notion of oral and silent reading (Simonson, 1995). Such research interests included the following: oral reading and silent reading (Mead, 1915; Pintner, 1913; Simonson, 1995; Thorndike, 1971), reading skills (McClure, 1926), content-area reading instruction (Gray, 1925), reading mechanics, such as vocabulary, constructions, and organization (Thorndike, 1934), and the processes involved in reading.

Beginning in 1925, Gray's statement, "Every teacher who makes reading assignments is responsible for the direction and supervision of the reading and study activities that are involved" (p. 71; Siebert & Draper, 2008) generated much attention. Currently, his words are better known as the following mantras: *every teacher a reading teacher* (Siebert & Draper, 2008) or *every teacher is a teacher of reading* (Alvermann, Friese, Beckmann, & Rezak, 2011; Moore et al., 1983). The call was supported by the National Committee on Reading, which stressed the need for reading across disciplines (Moore et al., 1983). In 1944, Artley voiced a similar questions that continues to be in dispute: Who is responsible for teaching content-area reading? Does this role belong to the reading teacher, the English language arts teacher, or the content-area teacher (Simonson, 1995)? These sentiments were echoed ten years later when Simpson (1954) argued, "No matter how poorly or how well high-school students can now read, every high-school teacher can help them to read with better understanding the textbook and the other materials that are required in his course" (p. 3). Similarly, both Flesch's (1955) *Why Johnny Can't Read* and U.S. Education Commissioner Allen's (1969) decree that all learners have "The Right To Read" echo these sentiments.

The transition in acknowledging the importance of integrated reading and content-area reading also highlighted the argument that reading instruction was not the sole responsibility for elementary instruction but should extend to secondary levels as well (Flanagan, 1975). Reading instruction is a multi-level approach and is not isolated to one level of education; rather, it is a learning continuum needed to traverse new knowledge and the demands of evolving curricula.

The above-mentioned paradigm held throughout the 1970s (Flanagan, 1975), and authorities in reading instruction reiterated Gray's call to incorporate literacy into content-area instruction (Durkin, 1978-1979; Hall, 2005; Herber, 1970; Moore et al., 1983). According to Dishner and Readence (1978), content reading had already established a complete trajectory for the "Past. Present! Future?" (p. 78) and has, as a result, generated a vast amount of articles, books, and conference presentations dedicated to reading instruction in content-area classes. One of the original works on the subject of content-area reading, Herber's (1970, 1978) *Teaching Reading in Content Areas*, further endorsed the concept of teaching cognitive strategies for building a sense of text for adolescents as they progress through the secondary levels (Moje, 2007).

The concept of secondary reading comprehension was followed by the instrumental and observational research conducted by Durkin and colleagues (1978-1979), in which they evaluated the amount of comprehension instruction in the primary grades. Their findings showed little to no comprehension

instruction was witnessed (Durkin, 1978-1979); instead, the majority of instruction was devoted to questioning (Pearson, 1985). To address the instructional deficits and needs for reading instruction revealed by Herber's and Durkin's research, large-scale implementation of school-wide programs and teacher preparation programs became more common (Austin, 1961; Braam & Roehm, 1964; Dupuis, Askov, & Lee, 1979; Smith & Otto, 1969).

With their findings, Durkin and her colleagues also encouraged attention for researching the obstacles facing content-area reading implementation and instruction (Gillespie & Rasinski, 1989). According to Gillespie and Rasinski (1989), such problems include both legislative and bureaucratic hurdles coupled with content-area teachers' beliefs and attitudes toward reading instruction (i.e., resistance). The publication of *A Nation at Risk: The Imperative for Education Reform*, prompted political involvement and the support of government funding (Gardner et al., 1983). Evidence of continued researcher interest and support prompts us to describe how reading and content-area reading are entities that continue to impact legislation.

National Reading Panel, No Child Left Behind, and Common Core State Standards

With an increased focus upon the inclusion of content-area reading interests as a valuable asset in both the elementary and secondary level classrooms, Vacca (1998) cautioned against marginalizing adolescent literacy (Richardson, 2008) and addressed the additional needs of adolescent learners beyond the infusion of content-area reading. Transitioning from the strategic reading of the 1990s into the 21st century, the ongoing conversation about content-area reading and content knowledge increased, specifically in response to the enhanced attention upon standards-based assessment with No Child Left Behind Act of 2001 (NCLB) (PL 107-110). This act was an extension of the Elementary and Secondary Education Act of 1965 (ESEA) and the Reading Excellence Act of 1998, and it was sanctioned with the expectation that all students read proficiently by the end of third grade. The research on teaching literacy evolved, and content-area researchers were primarily focused on the barriers and obstacles faced by PSTs' beliefs and resistance toward integrating literacy practices (Bean, 1997; O'Brien & Stewart, 1990).

In 2000 the National Reading Panel (NRP) report worked as a foundational support to increased levels of literacy research. The NRP report greatly influenced the direction of literacy research and, therefore, research funding. The findings from this meta-analysis recognized five vital components of effective reading instruction. These five components included instruction in the following: phonemic

awareness, phonics, fluency, vocabulary, and text comprehension (NRP, 2000). Unfortunately, the NRP report's limited attention to PST preparation, content-area literacy instruction, and continuing literacy development lessened research attention in these areas. However, the NRP report included gaps and controversies. For example, the team was overly charged from Congress with a daunting task (Yatvin, 2000); additionally the NRP only identified certain evidence-based studies, basing their results on effect sizes (Hammill & Swanson, 2006) and limiting their findings to quantitative research studies.

Additionally, NCLB requirements for highly qualified teachers included the following: a college degree, state certification, and demonstration of content mastery (Porter-Magee, 2004). The most vague and controversial of the three is the latter of the requirements. It requires all new and existing teachers to demonstrate content mastery in order to be considered highly qualified and meet the standards set by NCLB. According to Porter-Magee (2004), the "NCLB's shift away from certification that includes student teaching and pedagogy courses, mandating that teachers demonstrate content knowledge forces people to rethink what it means to be qualified to teach. Such a shift was unwelcome in many education circles" (p. 27).

With states distancing themselves from NCLB and lingering controversies surrounding the NRP report, several publications have further examined literacy and literacy instruction (NEA, 2013). Such publications include the following: *Theoretical Models and Processes of Reading* (6th ed., 2013), *The Handbook of Research on Teaching the English Language Arts*, (3rd ed., 2011), and *The Handbook of Reading Research* (Vol. IV, 2011). More than 10 years later, reading instruction and practices have moved beyond the NRP report and are heavily influenced by the legislation of the Common Core State Standards (CCSS), produced by the National Governors Association Center for Best Practices (NGA) and Council of Chief State School Officers (CCSSO). The CCSS's intended purposes was to help teachers prepare students with the knowledge and skills needed to be successful learners with the support of clear goals (NGA Center & CCSSO, 2010). Additionally, the standards offered continuity between schools, as well as from state to state (NGA Center & CCSSO, 2010). As recent as January 2016, the CCSS are being implemented by over 40 states, the District of Columbia, four territories, and the Department of Defense schools (CCSS, 2016).

The CCSS were adopted swiftly and implemented in many states, but unfortunately little information or training was provided prior, thus resulting in confusion. For example, Shanahan (2012) posited how the adoption of the CCSS caused educators anxiety, as well as "misperception, confusion, and

rumor” (p. 11), but as his article inquired—is this really the case? Shanahan attempted to provide clarity about the standards and what they actually say. In terms of literacy and disciplinary literacy, Shanahan dispelled one myth that states, “English teachers can no longer teach literature in literature classes” (p. 14). He explained that this is an extreme stance. Rather, he elaborated, “Students will need to spend more time reading informational texts—but in their science and history classes. Teachers in these content areas will now need to play a larger role in teaching the literacy of those subjects (Shanahan & Shanahan, 2008; Shanahan, 2012).

Although we acknowledge that our work does not provide a thoroughly inclusive historical review of content-area reading, our aim is to provide an understanding of how content-area reading has evolved over the decades under the influences of policy and research. Next, we explore content-area writing within a similarly intended historical review.

The Historical Context of Content-Area Writing

Similar to content-area reading, research and practitioners in the area of writing have endeavored to bring a renewed focus to research in the field. A fairly recent emphasis on writing research was spurred by the College Board’s plan to include a writing sample with its college entrance exam, the SAT (formerly the Scholastic Aptitude Test), beginning in 2005 (Shaw & Kobrin, 2012). Since 2005 the SAT has gone through extensive changes, the essay portion included (Lewin, 2014). In 2003, The National Commission on Writing in America’s Schools and Colleges published a call to action for policymakers and educators, *The Neglected “R”: The Need for a Writing Revolution*. The report used the National Assessment of Educational Progress (NAEP) test data and the impending change in SAT testing to raise awareness and argue that writing instruction should receive the same intensity of focus enjoyed by reading.

Biancarosa and Snow (2006) then narrowed the focus to literacy in the adolescent years with the publication of *Reading Next: A Vision for Action and Research in Middle and High School Literacy*, which outlines fifteen elements that ideally should be present in adolescent literacy programs. Two of these elements pertain directly to content-area writing: (a) “Effective instructional principles embedded in content, including language arts teachers using content-area texts and content-area teachers providing instruction and practice in reading and writing skills specific to their subject areas,” and (b) “Intensive writing, including instruction connected to the kinds of writing tasks students will have to perform well in high school and beyond” (p. 4). The authors envisioned a school in which

students were taught and encouraged to use reading and writing skills to become “subject-area experts” (p. 15) in each of their courses.

To characterize the research in the field, Graham and Perin (2007c) followed the writing research meta-analysis methods of individuals such as Hillocks (1987) in their answer, *Writing Next: Effective Strategies to Improve Writing of Adolescents in Middle and High Schools*. In their additional work, Graham and Perin (2007a, 2007b) found 582 potential studies in the initial search for their 2007 meta-analysis on writing. That number of studies did not come close to approaching the numbers reported by the National Institute of Child Health and Human Development (NICHD, 2000) for reading research studies, which was estimated to be more than 100,000. The following year, Graham (2008) wrote the introduction to an issue of *Reading and Writing*, noting that even with such an inclusionary and equitable title, a special issue had to be set apart and devoted to the topic of writing. It appeared that educational research had propagated the notion of the “neglected ‘R’” (Goatley, 2012; National Commission on Writing in America’s Schools and Colleges, 2003).

Writing to Learn

These tenets of writing development dovetail with the cognitive theories of writing that guide content-area writing research, especially within the major subcategory of writing-to-learn research. Britton (1970) and Emig (1977) began advocating that writing processes were similar to learning processes; however, the past four decades of writing-to-learn research have clarified their more holistic stance into both metacognitive and process stances. These stances were framed within two major conceptual approaches (Bangert-Drowns et al., 2004; Graham et al., 2013; Gunel, Hand, & McDermott, 2009; Keselman, Kaufman, Kramer, & Patel, 2007). One approach examined writing through the writer’s cognition and motivation, while the other approach emphasizes the context in which the writing originates and evolves. Bereiter and Scardamalia (1987) proposed the metacognitive stance, wherein writers move gradually along the continuum from *conveying* knowledge, a more novice-oriented activity, to *transforming* knowledge, a more advanced-oriented activity. Conversely, Torrance and Galbraith (1999) proposed a process stance in which students are *constituting* and *generating* knowledge during the stages of the writing process.

Writing Instruction

In light of what is known about writing development, researchers have worked to integrate writing instruction as it becomes relevant in the developmental

stages. Several approaches and strategies are discussed in the current research on writing instruction. Even though some of these approaches and strategies may be uniquely named or described by other authors, the key components of writing instruction are discussed in the following paragraphs, organized by how each informs the other. These components align well with the writing development stance advocated by the meta-analytic work of Graham and Perin (2007c).

Approaches to Teaching Writing

In *Teaching Writing in the Middle and Secondary Schools: Theory, Research, and Practice*, Soven (1999) defines four approaches to teaching writing: correctness, personal growth, rhetorical, and sociocultural. Glasswell and Kamberelis (2007) used this same framework of approaches when reviewing the *Handbook of Writing Research*. Their analysis of the chapters in the handbook concerned them since the current cognitive stance of the theorists and researchers does not seem to be reflected in classrooms.

Within these frameworks, key instructional strategies have captured the attention of writing researchers. Explicit and systematic strategy instruction, the first item on the list from *Writing Next* (Graham & Perin, 2007c), has been the focus of much research (Graham, Harris, & MacArthur, 2006; MacArthur & Lembo, 2009; Tracy, Reid, & Graham, 2009). One well-researched process that includes explicit strategy instruction is Self-Regulated Strategy Development (SRSD), and it should be noted that explicit instruction has also been found to be effective with struggling, at-risk, and dyslexic students (Berninger, Nielsen, Abbott, Wijsman, & Raskind, 2008; Berninger, Vaughan, et al., 2002; Berninger, Winn, et al., 2008). Both the strategy of collaborative writing and the writing process instructional approach are also addressed in recent studies (Cho & MacArthur, 2010; Midgette, Haria, & MacArthur, 2008). Additionally, writing researchers have also established that student writing is more likely to improve with the feedback from multiple peers rather than a single peer or a single expert (Cho & MacArthur, 2010).

In their introduction to a recent issue of *Reading and Writing*, Graham and colleagues (2013) list several foundational research-based factors that should be present in writing instruction. Teachers should provide the following: frequent opportunities for writing, a classroom environment that supports and grows writers, and explicit instruction in the skills, strategies, and knowledge needed for writing. These major components of time, environment, and explicit instruction, along with the collaborative element mentioned in the prior paragraph, are consistently addressed in the research.

Combining the Contexts of Reading and Writing Similar Developmental Processes

Often, researchers describe the writing developmental processes in terms of how they mirror the reading developmental processes, which implicitly bestows a greater value upon reading. The connections between the two forms are likely more complex than is fully understood. With the publication of *Because Writing Matters: Improving Student Writing in Our Schools* (National Writing Project [NWP] & Nagin, 2003), the NWP contributed to the effort to bring more attention to the field of writing. Although the book's overview is somewhat broad, the text does offer interesting insights into the development of writing skills as they relate to reading skills, such as an interview with P. David Pearson on how reading and writing develop in young children. Pearson describes the relationship between reading and writing as "synergistic" (NWP & Nagin, 2003, p. 33) and notes symmetric relationships in the key areas of development. For example, in the area of phonemic awareness, children are encouraged "to spell words as they sound them" (p. 33), and for structural and conceptual modeling, "writing makes things concrete and puts it out there for inspection" (p. 34). Similarly, Fitzgerald and Shanahan (2000) derived and categorized four areas of shared knowledge between reading and writing: metaknowledge (pragmatics), domain knowledge, procedural knowledge, and universal text attributes.

Conceived within a slightly different interpretation from literacy researchers, Elbow (2004), a writing theorist, issues a passionate call for writing instruction alongside—or even before—beginning reading instruction. He maintains that writing can bring a more mentally and physically active state to reading tasks, "breaking out" of traditional reading tasks that are associated with passive "consumption" (p. 10) and consciously crafting situations that engage students as active readers and active writers.

Differences Between Reading and Writing

Others agree that this idea of synergy does not mean that reading and writing are the same processes. Research by Berninger and colleagues (2002) examined the way language is processed through the four distinct systems of the mind: "language by ear (aural), language by mouth (oral), language by eye (reading), and language by hand (writing)" (p. 39). Although some reciprocity exists, it should not be assumed that reading and writing are simply inverse processes. Additionally, they found that reading enhances composition quality at all grades but that writing only impacts comprehension beginning around 4th grade. In their discussion, the authors posit that the normal sequence of writing development requires that the

introduction of writing tasks into content-area instruction should not occur until after the writing/comprehension connection is realized more fully.

After these beginning stages of development, students do not automatically become proficient writers in the sixth grade. According to Graham and Perin (2007c), “Writing proficiency develops over time” (p. 23). First, writers must develop fluency of ideas. Second, an awareness of form comes through an attention to audience and craft. Finally, correctness plays a role in the clear communication of ideas.

Common Core State Standards and Literacy Instruction

The Common Core State Standards recognize this reality of developmental processes, as evidenced by the structure of the English language arts standards (NGA Center & CCSSO, 2010). Even though the first set of skills is categorized into grades and/or grade bands for K-12 English language arts classes, a second set of standards is delineated for grades 6-12 literacy standards in history/social studies, science and technical subjects, and general content-area writing tasks such as writing to persuade, inform, explain, and present research.

In terms of literacy instruction and content-area literacy, the CCSS address specific literacy issues related to reading more challenging texts, promoting advanced literacy, and applying key aspects to reading conventions necessary to content-area reading (NGA Center & CCSSO, 2010; IRA [ILA], 2012). Rather than focusing solely on the key aspects of reading development for K-5 instruction using the five essential components of effective reading recognized by the NRP, the CCSS apply to reading in grades 2-12. This broader range of grade levels reflects the stance of the International Literacy Association (IRA [ILA], 2012). The ILA advocates instruction that engages students in the reading process with a variety of written texts and levels. The CCSS for English Language Arts represent the “effort to fulfill the charge issued by the states to create the next generation of K–12 standards in order to help ensure all students are college and career ready in literacy no later than the end of high school” (NGA Center & CCSSO, 2010, p. 3).

According to the standards outlined by the CCSS, comprehension instruction should concentrate on goals and learning outcomes for all texts including content-area literacy texts (NGA Center & CCSSO, 2010). Teachers should provide students multiple opportunities to read text and pay attention to meaning through critical discussions. Furthermore, the integration of strategies, such as summarizing, asking questions, using text structures, visualizing, and comprehension monitoring, further develop the learning process. This integration promotes critical thinking skills, invites interpretation, and challenges the reader to think independently (IRA [ILA], 2012).

Therefore, the advent of the CCSS brings renewed attention to content-area literacy and the resulting impact upon teacher preparation. By applying the CCSS, students are afforded the opportunities to learn from wide ranges of texts, therefore providing them with the experiences of analyzing primary and secondary sources. Through exploring all content areas, students gain access and build knowledge in all areas of work and academic disciplines, and “students learn through reading domain-specific texts in history/social studies, science, and technical subjects and by writing informative/explanatory and argumentative pieces” (NGA Center & CCSSO, 2010, p. 3).

Conclusions and Recommendations

More recently, disciplinary literacy has emerged as a unique entity. Although related to content-area literacy, disciplinary literacy denotes a more developed and alternative perspective. According to Shanahan and Shanahan (2008), the recently coined phrase “disciplinary literacy” (p. 40) describes the advanced literacy resulting from embedded instruction in content-area classes (e.g., English language arts, mathematics, science, and social studies). Disciplinary literacy, then, goes beyond the tools used to learn the disciplines and expands to the “literacy skills specialized to history, science, mathematics, literature, or other subject matter” (Shanahan & Shanahan, 2008, p. 44). Literacy instruction facilitates but does not compete with the learning of the content (Hall, 2005).

This distinction brings the “who teaches reading” argument full-circle. Artley (1944) originally posed this question over 60 years ago, but the continuous question among researchers and teachers still stems from the integration of literacy and content-area instruction. This issue was then addressed in the 1970s, when explicit interest regarding instructional reading practices in the content areas arose in response to changes in certification requirements (Bader, 1975). These new teaching prerequisites, required elementary and secondary education majors to take a minimum of one reading methods course (Bader, 1975; Hollingsworth & Teel, 1991; Schleich, 1971; Welle, 1981; Willingham, 2006). Since the 1970s such university requirements are still in practice; these courses are designed to teach and prepare PSTs to integrate literacy practices within content-area or disciplinary instruction. Thus, disciplinary literacy standards have now incorporated the instruction of reading and writing into the content classrooms, e.g., English language arts, mathematics, social studies, science, and technical subjects (NGA Center & CCSSO, 2010; IRA [ILA], 2012). Moving away from the instruction of literacy basics, disciplinary literacy instruction

introduces students to the problem solving and specialized thinking taught in grades 6-12 (IRA [ILA], 2012).

Teacher preparation programs are the logical venue for proactively addressing teachers' understanding and strategy development and preparation for teaching content-area and disciplinary literacy strategies. Therefore, researchers (e.g., Darling-Hammond & Youngs, 2002; Fisher & Ivey, 2005) continually assert that preservice teachers need appropriate development and preparation to teach and instruct literacy. Preservice teachers should be instructed in both content-area and disciplinary literacies, thus providing additional foundational literacy teaching skills needed to prepare students for future success in an interdisciplinary world.

Moreover, the connection of content-area reading and writing in conjunction with the CCSS supports more integration across grade levels and within the disciplines. Reading instruction is not isolated to teachers in the elementary grades, and literacy instruction is not reserved only for the ELAR teachers. Thus, a possible recommendation is that we need further research that incorporates more complex, classroom-based literacy instruction and takes account of teachers' and students' viewpoints. An understanding of students' learning processes and teachers' pedagogical practices could help literacy researchers explore these issues in an authentic, cohesive approach that more closely mirrors the integrated instruction occurring in today's classrooms.

Regrettably, King and Stahl (2012) posit that "literacy education has a 'secret' history" (p. 241), but why does that need to continue? The cycle needs to be broken, and more researchers in the profession need to be knowledgeable of literacy and its history. While we acknowledge the long-standing splits between reading and writing, literacy and contents, field and profession, and practitioners and researchers, we would much rather see a bridge across these traditional divides that mirrors the cohesive, integrated instruction necessary for successful student literacy growth.

References

- Alvermann, D., Friese, E., Beckmann, S., & Rezak, A. T. (2011). Content-area reading pedagogy and domain knowledge: A Bourdieusian analysis. *The Australian Association for Research in Education*, 38, 203-220.
- Artley, S. (1944). A study of certain relationships existing between general reading comprehension and reading comprehension in a specific subject-matter area. *Journal of Educational Research*, 37, 464-73.
- Austin, M. (1961). *The torch lighters*. Cambridge, MA: Harvard University.
- Bader, L. A. (1975). Certification requirements in reading: A trend. *Journal of Reading*, 19, 237-240.

- Bangert-Drowns, R. L., Hurley, M. M., & Wilkinson, B. (2004). The effects of school-based writing-to-learn interventions on academic achievement: A meta-analysis. *Review of Educational Research, 74*(1), 29-58.
- Bean, T. W. (1997). Preservice teachers' selection and use of content literacy strategies. *The Journal of Educational Research, 90*, 154-163. doi:10.1080/00220671.1997.10543771
- Bean, T. W. (2002). Text comprehension: The role of activity theory in navigating students' prior knowledge in content teaching. In C. Roller (Ed.), *Comprehensive reading instruction across grade levels* (pp. 133-147). Newark, DE: International Reading Association.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.
- Berninger, V. W., Abbott, R. D., Abbott, S. P., Graham, S., & Richards, T. (2002). Writing and reading: Connections between language by hand and language by eye. *Journal of Learning Disabilities, 35*(1), 39.
- Berninger, V. W., Nielsen, K. H., Abbott, R. D., Wijsman, E., & Raskind, W. (2008). Writing problems in developmental dyslexia: Under-recognized and under-treated. *Journal of School Psychology, 46*(1), 1-21. doi:10.1016/j.jsp.2006.11.008
- Berninger, V. W., Vaughan, K., Abbott, R. D., Begay, K., Coleman, K. B., Curtin, G., . . . Graham, S. (2002). Teaching spelling and composition alone and together: Implications for the simple view of writing. *Journal of Educational Psychology, 94*(2), 291.
- Biancarosa, C., & Snow, C. E. (2006). *Reading next: A vision for action and research in middle and high school literacy: A report to Carnegie Corporation of New York* (2nd ed.). Washington, DC: Alliance for Excellent Education.
- Braam, L. S., & Roehm, M. A. (1964). Subject-area teachers' skills. *Journal of Developmental Reading, 7*, 188-196.
- Britton, J. R. (1970). *Language and learning*. London, England: Allen Lane.
- Cho, K., & MacArthur, C. (2010). Student revision with peer and expert reviewing. *Learning & Instruction, 20*(4), 328-338. doi: 10.1016/j.learninstruc.2009.08.006
- Common Core State Standards Initiative. (2016). Retrieved from <http://www.corestandards.org/about-the-standards/development-process/>
- Dishner, E. K., & Readence, J. E. (1978). Content reading: Past. Present! Future? *Reading Horizons, 19*(1), 78-81.
- Darling-Hammond, L., & Youngs, P. (2002). Defining "highly qualified teachers": What does "scientifically-based research" actually tell us? *Educational Researcher, 31*(9), 13-25. doi:10.3102/0013189X031009013
- Dupuis, M., Askov, E., & Lee, J. (1979). Changing attitudes toward content-area reading: The content-area reading project. *The Journal of Educational Research, 73*(2), 66-74.
- Durkin, D. (1978-1979). What classroom observations reveal about reading comprehension instruction. *Reading Research Quarterly, 14*, 481-533.
- Elbow, P. (2004). Writing first! *Educational Leadership, 62*(2), 8-13.

- Emig, J. (1977). Writing as a mode of learning. *College Composition and Communication*, 28, 122-128.
- Fisher, D., & Ivey, G. (2005). Literacy and language as learning in content-area classes: A departure from "Every Teacher a Teacher of Reading". *Action in Teacher Education*, 27(2), 3-11. doi:10.1080/01626620.2005.10463378
- Fitzgerald, J., & Shanahan, T. (2000). Reading and writing relations and their development. *Educational Psychologist*, 35(1), 39-50. doi: 10.1207/S15326985EP3501_5
- Flanagan, B. A. C. (1975). A competency-based assessment of secondary teachers' attitudes and perceptions of qualification in content-area literacy instruction. *University of Oregon. ProQuest Dissertations and Theses*.
- Flesch, R. (1955). *Why Johnny can't read and what you can do about it*. New York: Harper and Row.
- Gardner D. P., Larsen, Y. W., Baker, W. O., Campbell, A., Crosby, E. A., Foster, C. A. . . . Wallace, R. (1983). *A nation at risk*. Retrieved from: http://datacenter.spps.org/uploads/SOTW_A_Nation_at_Risk_1983.pdf
- Gee, J. P. (2014). Reading at a crossroads?: Disjunctures and continuities in current conceptions and practices. In R. J. Spiro, M. DeSchryver, M. S. Hagerman, P. M. Morsink, and P. Thompson (Eds). *Three paradigms in reading (really literacy) research and digital media*. (35-50). New York City, NY: Routledge.
- Gillespie, C., & Rasinski, T. (1989). Content-area teachers' attitudes and practices toward reading in the content-areas: A review. *Reading Research and Instruction*, 28(3), 45-67.
- Glasswell, K., & Kamberelis, G. (2007). Drawing and redrawing the map of writing studies. *Reading Research Quarterly*, 42, 304-323.
- Goatley, V. (2012). Slicing and dicing the ELA Common Core Standards. *Principal*, 18(20), 16-18.
- Graham, S. (2008). Research on writing development, practice, instruction, and assessment: Introduction to a special issue of reading and writing. *Reading and Writing*, 21(1), 1-2. doi: 10.1007/s11145-007-9069-7
- Graham, S., Gillespie, A., & McKeown, D. (2013). Writing: Importance, development, and instruction. *Reading and Writing*, 26(1), 1-15. doi: 10.1007/s11145-012-9395-2
- Graham, S., Harris, K. R., & MacArthur, C. (2006). Explicitly teaching struggling writers: Strategies for mastering the writing process. *Intervention in School & Clinic*, 41(5), 290-294.
- Graham, S., & Perin, D. (2007a). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, 99(3), 445-476. doi: 10.1037/0022-0663.99.3.445
- Graham, S., & Perin, D. (2007b). What we know, what we still need to know: Teaching adolescents to write. *Scientific Studies of Reading*, 11(4), 313-335. doi: 10.1080/10888430701530664
- Graham, S., & Perin, D. (2007c). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools—A report to Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.

- Gray, W. S. (1925). A modern program of reading instruction for the grades and high school. In G. M. Whipple (Ed.), *Report of the National Committee on Reading: 24th Yearbook of the National Society for the Study of Education, Part 1* (pp. 21–73). Bloomington, IL: Public School Publishing Company.
- Griffin, C. C., & Tulbert, B. L. (1995). The effect of graphic organizers on students' comprehension and recall of expository text: A review of the research and implications for practice. *Reading and Writing Quarterly: Overcoming Learning Difficulties*, 11(1), 73-89.
- Gunel, M., Hand, B., & McDermott, M. A. (2009). Writing for different audiences: Effects on high-school students' conceptual understanding of biology. *Learning and Instruction*, 19(4), 354-367.
- Hall, L. A. (2005). Teachers and content-area reading: Attitudes, beliefs, and change. *Teacher and Teacher Education*, 21, 403-414.
- Hammill, D. D., & Swanson, H. L. (2006). The National Reading Panel's meta-analysis of phonics instruction: Another point of view. *The Elementary School Journal*, 107(1), 17-26.
- Herber, H. L. (1970). *Teaching reading in content areas*. Englewood Cliffs, NJ: Prentice Hall.
- Hollingsworth, S., & Teel, K. (1991). Learning to teach reading in secondary math and science. *Journal of Reading*, 35(3), 190-194.
- Hillocks Jr., G. (1987). Synthesis of research on teaching writing. *Educational Leadership*, 44(8), 71.
- International Reading Association. (2012). *Adolescent literacy* (Position statement, Rev. 2012 ed.). Newark, DE: Author.
- Kamil, M. L. (2003). *Adolescents and literacy: Reading for the 21st century*. Washington, DC: Alliance for Excellent Education.
- Keselman, A., Kaufman, D. R., Kramer, S., & Patel, V. L. (2007). Fostering conceptual change and critical reasoning about HIV and AIDS. *Journal of Research in Science Teaching*, 44(6), 844-863. doi:http://dx.doi.org/10.1002/tea.20173
- King, K. R., & Stahl, N. A. (2012). Toward systematic study of the history and foundations of literacy. *Reading Psychology*, 33(3), 241-268. doi:10.1080/02702711.2010.507647
- Lewin, T. (2014). A new SAT aims to realign with schoolwork. *The New York Times*, 5. Retrieved from http://mathleadershipcorps.com/wp-content/uploads/2014/03/A-New-SAT-Aims-to-Realign-With-Schoolwork-NYTimes.com_.pdf
- MacArthur, C. A., & Lembo, L. (2009). Strategy instruction in writing for adult literacy learners. *Reading and Writing*, 22(9), 1021-1039. doi: 10.1007/s11145-008-9142-x
- McClure, W. (1926). Learning to read arithmetic problems. *Teachers Journal and Abstract*, 1, 183-188.
- Mead, C. D. (1915). Silent versus oral reading with one hundred sixth-grade children. *The Journal of Educational Psychology*, 6, 345-348.
- Midgette, E., Haria, P., & MacArthur, C. (2008). The effects of content and audience awareness goals for revision on the persuasive essays of fifth- and eighth-grade students. *Reading and Writing*, 21(1), 131-151. doi: 10.1007/s11145-007-9067-9

- Moje, E. B. (2007). Chapter 1: Developing socially just subject-matter instruction: A review of literature on disciplinary literacy teaching. *Review of Research in Education, 31*(1), 1-44.
- Moore, D. W., Readence, J. E., & Rickelman, R. J. (1983). An historical exploration of content area reading instruction. *Reading Research Quarterly, 18*, 419-438.
- National Association of State Boards of Education. (2006). *Reading at risk: How states can respond to the crisis in adolescent reading*. Alexandria, VA: National Association of State Boards of Education.
- National Commission on Writing in America's Schools and Colleges. (2003). *The neglected "R": The need for a writing revolution*. New York City, NY: College Entrance Examination Board.
- National Education Association. (2013). *Reading yesterday and today: The NRP report and other factors*. Retrieved from http://www.nea.org/readingupdates?&lang=en_us&output=json&session-id=5f40f88b7ef453113fe160b70ebf7764
- National Governors Association Center for Best Practices, & Council of Chief State School Officers. (2010). *Common core standards for English language arts*. Washington D.C.: Author.
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel: Teaching children to read*. Bethesda, MD: Author.
- National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Washington, DC: National Institute of Child Health and Human Development.
- National Writing Project, & Nagin, C. (2003). *Because writing matters: Improving student writing in our schools*. San Francisco, CA: Jossey-Bass.
- O'Brien D. G., & Stewart, R. A. (1990). Preservice teachers' perspectives on why every teacher is not a teacher of reading: A qualitative analysis. *Journal of Reading Behavior, 22*, 101-129. doi:10.1080/10862969009547699
- Pearson, P. D. (1985). Changing the face of reading comprehension instruction. *The Reading Teacher, 38*, 724-738.
- Pintner, R. (1913). Oral and silent reading of fourth grade pupils. *Journal of Educational Psychology, 4*, 333-337.
- Porter-Magee, K. (2004). Teacher quality, controversy, and NCLB. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 78*(1), 26-29.
- Ruth, L. P. (2003). Who has the power? Policymaking and politics in the English language arts. In J. Flood, D. Lapp, J. R. Squire & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts* (2nd ed., pp. 87-113). Mahwah, N.J.: L. Erlbaum Associates.
- Richardson, J. S. (2008). Content area reading: A 0-year history. In M. J. Fresh (Ed.), *An essential history of current reading practices* (pp. 120-143). Newark, DE: International Reading Association.
- Schleich, M. (1971). Groundwork for better reading in content-areas. *Journal of Reading, 15*(2), 119-126.

- Shanahan, T. (2012). The Common Core ate my baby and other urban legends. *Educational Leadership*, 70(4), 10-16.
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, 78(1), 40-59.
- Scott, C. E. (2013). *Every teacher a teacher of reading?: A systematic literature review of content-area literacy* (Unpublished doctoral dissertation). Texas A&M University, College Station, TX.
- Shaw, E. J., & Kobrin, J. L. (2012). *The SAT essay and college performance: Understanding what essay scores add to the HSGPA and SAT*. New York, NY: The College Board.
- Siebert, D., & Draper, R. J. (2008). Why content-area literacy messages do not speak to mathematics teachers: A critical analysis. *Literacy Research and Instruction*, 47, 229-245.
- Simpson, E. A. (1954). *Helping high-school students read better*. Chicago, IL: Science Research Associates.
- Simonson, S. D. (1995). A historical review of content area reading instruction. *Reading Psychology*, 16(2), 99-147.
- Slavin, R. E., Cheung, A., Groff, C., Lake, C., Slavin, R. E., Cheung, A., . . . Lake, C. (2008). Effective reading programs for middle and high schools: A best-evidence synthesis. *Reading Research Quarterly*, 43(3), 290-322.
- Smith, R., & Otto, W. (1969). Changing teacher attitudes toward teaching reading in the content-areas. *Journal of Reading* 12(4), 299-304.
- Soven, M. (1999). *Teaching writing in middle and secondary schools: Theory, research, and practice*. Boston: Allyn and Bacon.
- Squire, J. R. (2003). The history of the profession. In J. Flood, D. Lapp, J. R. Squire & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts* (2nd ed., pp. 3-17). Mahwah, N.J.: L. Erlbaum Associates.
- Thorndike, E. L. (1934). Improving the ability to read. *Teachers College Record*, 36, 1-19, 123-144, 229-241.
- Thorndike, E. L. (1971). Reading as reasoning: A study of mistakes in paragraph reading. *Reading Research Quarterly*, 6(4), 425-434.
- Torrance, M., & Galbraith, D. (1999). Conceptual processes in writing: From problem solving to text production. In M. Torrance & D. Galbraith (Eds.), *Knowing what to write: Conceptual processes in text production* (pp. 1-12). Amsterdam, The Netherlands: Amsterdam University Press.
- Tracy, B., Reid, R., & Graham, S. (2009). Teaching young students strategies for planning and drafting stories: The impact of self-regulated strategy development. *Journal of Educational Research*, 102(5), 323-332.
- Usova, G. M. (1978). Comparing attitudes toward reading instruction among secondary principals, reading specialists, and content-area teachers. *Reading Improvement*, 16(2), 169-174.
- Vacca, R. T. (1998). Literacy issues in focus: Let's not marginalize adolescent literacy. *Journal of Adolescent & Adult Literacy*, 41(8), 604-609.

- Welle, D. (1981). Effects of required reading methods course on attitudes of secondary education majors—A three-year study. *The Journal of Reading, 25*(2), 134-136.
- Willingham, D. T. (2006). The usefulness of brief instruction in reading comprehension strategies. *American Educator, 50*, 39-45.
- Yatvin, J. (2000). Minority view. In Report of the National Reading Panel. *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (pp. 1–6). Washington, DC: National Institute of Child Health and Human Development.

A STUDY OF PRE-SERVICE TEACHERS AND THEIR SELF-EFFICACY: USING ADAPTED BOOKS FOR LITERACY INSTRUCTION FOR LEARNERS WITH DISABILITIES IN INCLUSION CLASSROOMS

Robin D. Johnson

Texas A&M University - Corpus Christi

L. Kathleen Sheriff

Stephen F. Austin State University

Abstract

Special Education and General Elementary Education faculty collaborated together in a spirit of inclusion effort to model and create an adapted books activity supporting access to the general literacy curriculum for young elementary children with disabilities. General education pre-service teachers learned to adapt typical children's classroom books from the general curriculum. A multiple methods research study was conducted regarding pre-service teachers' self-efficacy concerning teaching children with disabilities in their future inclusion classrooms. This study also investigated the impact of the adapted books collaboration project for participants in the area of literacy instruction for students with disabilities. Pre and post self-efficacy data were collected on the 35 pre-service teacher participants.

Qualitative data were collected from open-ended responses to questions about the attitudes, beliefs, and confidences of general education pre-service teachers in working with elementary age students with disabilities. The quantitative and qualitative data both indicated that the collaborative adapted book project had a positive impact on the self-efficacy of the general education pre-service teacher participants.

General education classrooms are increasingly becoming more inclusive. Students with disabilities are expected to receive instruction and access to the general curriculum in their inclusion classrooms. Teacher candidates now require differentiation skills for supporting all students placed in inclusive environments. The purpose of this study was to learn how pre-service teachers' self-efficacy towards students with disabilities was impacted by adapting typical books in literacy curriculum to meet the needs of diverse learners.

Theoretical Framework

In an age of accountability and inclusion of all students in public school classrooms, teachers' self-efficacy in teaching children from diverse populations such as those with disabilities is very important. Bandura's (1988, 2001) social cognitive theory may explain human functions such as choosing to become a teacher and then performing socially within the profession in terms of three areas that interact with each other reciprocally. Teacher cognition in tandem with human factors, behavior, and environments "subscribes to a model of emergent interactive agency" (p.2) allowing for as personal causal agents within life and teaching choices they make (Bandura, 2012, 1999, 1986). Central to personal agency in one's life as a teacher is the concept of self-efficacy in that "unless people believe they can produce desired results and forestall detrimental ones by their actions, they have little incentive to act or to persevere in the face of difficulties" (Bandura, 2001, p. 6). For teachers these difficulties may include those of responsibility and accountability for teaching children with disabilities.

According to Tschannen-Moran & Hoy (2001) teacher efficacy is related to "persistence, enthusiasm, commitment, and instructional behavior" and supports positive student achievement. Pre-service teacher self-efficacy is vital to positive outcomes for students from diverse backgrounds in inclusive classroom settings. Teaching general education pre-service teachers to pre-plan for future students with disabilities provides an excellent opportunity to increase self-efficacy prior to meeting the demands of on-the-job planning and commitment for students from diverse populations. Learning to adapt books for students with disabilities in a reading methods course requires college students to determine and meet authentic community needs.

Literature Review

In the Executive Summary of the Policy Statement on Inclusion of Children with Disabilities in Early Childhood Programs (2015), the U.S. Department

of Health and Human Services in conjunction with the U.S. Department of Education released a recommendation to the states to build educational systems that “ensure state certifications, credentials, and workforce preparation programs have a strong focus on inclusion” (2015, p. 4). One legal consideration listed for inclusion within the Executive Summary document is that the “Individuals with Disabilities Education Act (IDEA) of 2004 presumes that the first placement option considered for an eligible child with a disability is the regular classroom the child would attend if he or she did not have a disability” (2015, p. 2). The Executive Summary (2015) document also includes references to a “shared vision” to include the continuance of inclusion into higher school grades and post-school transition environments including the workplace and living community. The Executive Summary (2015) further stated the definition of inclusion as it relates to early childhood programs:

Inclusion in early childhood programs refers to including children with disabilities in early childhood programs, together with their peers without disabilities; holding high expectations and intentionally promoting participation in all learning and social activities, facilitated by individualized accommodations; and using evidence-based services and supports to foster their development (cognitive, language, communication, physical, behavioral, and social-emotional), friendships with peers, and sense of belonging. This applies to all young children with disabilities, from those with the mildest disabilities, to those with the most significant disabilities (p. 3).

The IDEA of 2004 and the No Child Left Behind Act of 2001 mandate students with disabilities rights to access the general education curriculum supporting “the changing landscape of elementary classrooms” into inclusive education classrooms including both typical students and students with disabilities (McHatton & Parker, 2013, p. 186). Inclusion classrooms within schools are “becoming the norm” (Taylor & Ringlaben, 2012, p. 16) and pre-service teacher preparation programs are now in need of supportive programming to prepare future teachers to teach students with disabilities. One main objective for teacher preparation programs is “to develop future teachers who hold inclusive attitudes toward diverse student groups and who are willing to advocate on their behalf” (Crowson & Bandes, 2014, p. 161) within the inclusive school environment. It is very important that programming for pre-service teachers “leads to the development of teachers’ practical wisdom in ensuring equity” (Florian, 2009, p. 534).

The definition of inclusion from the above Executive Summary (2015) document sets a high standard for all teachers. This includes pre-service teachers with less resources and experience in meeting the expectations of fulfilling the requirements of teaching students with disabilities in their future classrooms. This thought calls into question the actual attitudes and self-efficacy pre-service teachers may have about inclusion and whether they feel they are being adequately prepared to meet the needs of their future students with disabilities. Their attitudes about inclusion and the inclusion of students with disabilities into their future classrooms are important factors in how they perceive their future abilities to be successful in teaching. Pre-service teacher attitudes “are a critical component” regarding teaching students with disabilities in inclusion classrooms (Taylor & Ringlaben, 2012, p 16). “Teachers set the tone of classrooms, and as such, the success of inclusion may well depend upon the prevailing attitudes of teachers as they interact with students with disabilities in their classrooms.” (Carroll, Forlin & Joblin, 2003, p. 65). Research shows that “teachers with more positive attitudes toward inclusion” are more willing to positively accommodate their students with disabilities (Taylor & Ringlaben, 2012, p. 16).

Skaalvik & Skaalvik (2007) define teacher self-efficacy “as individual teachers’ beliefs in their own abilities to plan, organize, and carry out activities required to attain given educational goals” (p. 612). Teacher self-efficacy refers to the concept that how teachers view their own abilities influences their own desire to try new teaching methods and/or strategies (Takahashi, 2011). In their study of pre-service teachers, Taylor & Ringlaben (2012) found that both positive teaching attitudes and self-efficacy were achieved in tandem by participating in an undergraduate pre-service course addressing inclusion.

One perception regarding future successful teaching for students with disabilities may result from the transition of thought that general education pre-service teachers may not see themselves as responsible for the instruction of students with disabilities to the thought that they are responsible for the instruction of students with disabilities placed in their future classrooms. “The difference between effective and ineffective inclusion may lie in teachers’ beliefs about who has primary responsibility for students with special education needs” (Jordan, Schwartz, McGhie-Richmond, 2009, p. 541). A change in beliefs regarding attitudes of responsibility in pre-service programming may lessen fears and result in the “development of effective instructional techniques” (Jordan, Schwartz, McGhie-Richmond, 2009, p. 541) within inclusion classrooms.

While a body of research regarding pre-service teachers, their attitudes and self-efficacy exists in general, “little is known about the effects of teachers’ self-efficacy beliefs in the complex realm of literacy instruction” (Tschannen-Moran &

Johnson, 2011, pg. 753). This study attempts to increase general education pre-service teachers' positive attitudes and self-efficacy toward teaching students with disabilities in their inclusion classrooms. Knowing that one part of the IDEA requires students with disabilities to have access to the general curriculum, teacher educators have a responsibility to instruct students in undergraduate literacy courses how to meet the needs of diverse learners in their future inclusion classrooms.

Adapting on-grade-level books and text materials is one strategy that pre-service teachers can learn to do which could increase their attitudes and self-efficacy toward working with students with disabilities as well as increase the successfulness of their future students in literacy activities. Adaptation is described in this sense as modifying or customizing to support functional acquisition of the text material for students with disabilities. Adapting hard copies of books used in general education classrooms is also a way to address the challenge of assisting students with disabilities in inclusion classrooms to access the general curriculum. Some adaptations of books could include, "summarizing novels in brief passages, pairing keywords with picture symbols, and adding a repeated story line that emphasizes the main idea of the story" (Hudson, Browder, and Wakeman, 2013, pg. 14). Including teaching strategy experiences such as adapting books for children with disabilities may "increase pre-service teachers' knowledge and understanding of students with disabilities and decrease any negative attitudes they may hold" (Crowson & Brandes, 2014, pg. 176).

Methods

Multiple methods were used to address the research question: Is the self-efficacy of pre-service teachers on literacy instruction with learners with disabilities impacted as a result of participation in an adapted book project during an early childhood literacy course? A pre-experimental design employing multiple methods with no control group was used. Quantitative pre and post self-efficacy data were collected from a likert-type rating scale, while qualitative data were collected from open-ended responses to questions after the project was complete. The research study involved 35 general education pre-service teacher candidates participating in an adapted book activity to address access to the general literacy curriculum for students with disabilities. During a three-week project in a junior level early childhood literacy course, these pre-service candidates studied fair use components of copyright law in tandem with the use of assistive technology software and craft material supports to differentiate and adapt a general elementary curriculum book for a child with a disability.

Procedures

Prior to participating in the adapted book project the general education pre-service candidates were asked to rate themselves using a five point Likert-type scale on their self-efficacy, particularly knowledge level and confidence level, in working with students with disabilities in a general education classroom. A special education professor joined the general education professor during the three-week project to co-teach this general education literacy course in which teacher candidates learned about the developmental processes of reading and writing in elementary age children. The general education professor taught the pre-service candidates the theory of language acquisition for grades pre-kindergarten through third grade, and the importance of interaction with books to increase vocabulary and literacy skills. Language delays and disabilities that affect children as they develop language and reading skills were discussed.

The special education professor taught the process and considerations for adapting books for learners with special needs which included: assistive technology, copyright laws pertaining to equal access, and shared multiple websites. Adapted book samples provided authentic and concrete examples of the supportive structures. Lessons within this project also included types of disabilities that make up the learning profile for diverse student needs that may be placed in inclusive environments and ways other materials, as well, can be adapted for optimum use in the general education classroom. Classroom discussions included access to the general literacy curriculum addressing state standards in spoken and written language mandated by law for all students placed in inclusion classrooms.

Other classroom discussions facilitated by both the special education and general education faculty involved learning that adapting school approved children's books to meet the needs of students with diverse learning needs allows many students with disabilities to access the curriculum in unique individualized ways. Pre-service teachers learned to locate themes in curriculum and match these with book storylines, cut books apart, laminate pages, use glue and velcro to attach photos and universal icons to pages, and to use arts/crafts materials to support page turning for students with dexterity and fine motor issues. They also learned how to create detachable velcro manipulatives to support both vocabulary acquisition and mathematical problem solving, to record books on CDs encased in the book binding, to braille simple words on inserted pages, and how to store materials and the books for ease and repetition of use.

The general pre-service teacher candidates each chose a content-area book to adapt along with the type of disability concern they wanted to support. They were given access to the teacher preparation room at the college for printing

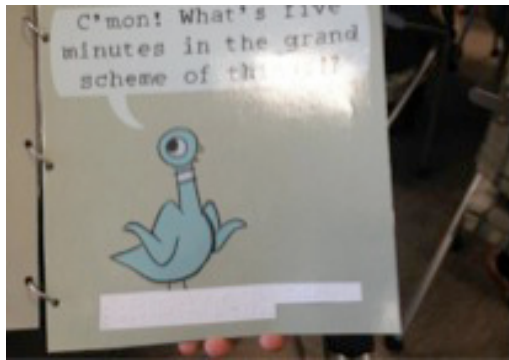


Figure 1. Adapted Book Using Braille.

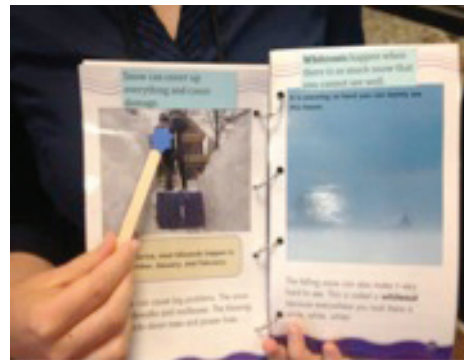


Figure 2. Adapted Book Using Paraphrasing.

and laminating along with access to arts/crafts supplies if they chose to utilize those types of materials in adapting their individual books. Thirty-five books were adapted for grade levels K-3 with more than half of those pertaining to the content areas of math, science, and social studies.

Figure 1 shows an example of a book adaptation using braille for students with visual impairments and binder rings for help in turning pages. Figure 2 shows the adaptations of paraphrasing important information which was typed in large print and attached to the page with Velcro for easy removal if needed and the use of a small pointer included with the book to assist with directionality, pointing out important vocabulary, and focus. Binder rings were also used with this book to aid in turning the pages.

After the completion of the adapted book project the candidates again rated themselves using the same likert scale used prior to project participation. They also completed five open ended reflective questions about the collaborative adapted book project. The adapted books were then donated to a local public library for community use.

Data Collection and Findings

Quantitative

Pre-service teacher candidates rated their knowledge of the legislation and teaching practices as they pertain to students with disabilities on a five-point Likert-type rating scale (5 = very good; 1 = none) before and after participation in the adapted book project. They also rated themselves on their level of confidence in teaching literacy to students with disabilities in inclusive settings (5 = very high; 1 = very low). Table 1 shows the two self-reflective survey statements and the means and standard deviations of the self-reflection ratings from before and after the collaborative adapted book project. Table 2 shows the results of

TABLE 1
Self-Efficacy Item Means and Standard Deviations

Item	Mean	SD
Pre: My knowledge of the legislation and teaching practices as they pertain to children with disabilities	1.97	.577
Post: My knowledge of the legislation and teaching practices as they pertain to children with disabilities	2.47	.563
Pre: My level of confidence in teaching students with disabilities	1.74	.852
Post: My level of confidence in teaching students with disabilities	2.23	.731

Note: N = 35

paired-samples t-tests that were conducted to compare the self-rated levels the students reported pre and post project.

Participants ranked themselves on two open-ended statements of knowledge and confidence before the project began: *My knowledge of the legislation and teaching practices as they pertain to children with disabilities is . . .*, and *My level of confidence in teaching students with disabilities is . . .*. These statements were specifically used by both the general education and special education professors to plan instruction for the early childhood literacy course. After the project was completed, the self-reflection data were used to assess the effectiveness of instruction in understanding the legislation and instructional practices for general education teachers and the confidence in adapting children's books for students with disabilities in an inclusion classroom. The reported increase in knowledge and confidence was significant suggesting that the collaborative adapted book project increased pre-service teacher candidate self-efficacy in teaching students with learning disabilities (Table 2).

Qualitative

Five open ended, reflective questions were asked concerning the attitudes, beliefs, and self-efficacy of the pre-service teacher candidates after completion of the collaborative project:

TABLE 2
Knowledge and Confidence Paired Samples Statistics

		<u>95% Confidence Interval of the Difference</u>		Sig. (2 tailed)	
		Upper	t		df
Pair 1	Knowledge	-.21189	-3.531	33	.001
Pair 2	Confidence	-.18106	-3.240	34	.003

Note: Significance <.0056

- What influence do you think the collaborative project has had on your future classroom practices?
- What design strategies did you implement in your adapted book that were most successful?
- What design strategies did you implement in your adapted book that were least successful?
- What were some of the barriers you experienced in adapting your book?
- How did your understanding of adapting books for students with disabilities evolve through this collaborative project?

The researchers used a constant comparative data analysis technique developed by Glaser and Strauss (1967) to analyze the answers given by the participants. Words and phrases were highlighted in the written reflections. The researchers made notes in the margins and categorized the items that related to one another. After highlighting key points, similar concepts led to emerging categories. As the researchers constructed these categories, a title was given to describe the linked items until no other categories or themes were found (Merriam, 1998). Two broad themes became apparent that correlated with the definition of self-efficacy: evolution of knowledge and increase of confidence level.

Theme: Evolution of knowledge: From not knowing to knowing

When discussing questions concerning design, barriers, and understanding, the theme of the evolution of knowledge was repeated. Preservice teacher candidates discussed their increase in knowledge and ability to design and create the adapted books and their growth in understanding of how to best ensure successful learning with all of their students. Examples of student responses follow:

“My **understanding completely changed**. I **really didn't know** what an adapted book was **and now I feel comfortable** making/using them in my future classroom.”

“My understanding evolved by **expanding my knowledge** of **how many ways** there are **to adapt** all kinds of books for all kinds of children with disabilities.”

“I **became a lot more knowledgeable** on **how to adapt** for different disabilities.”

“I was **able to understand how I could make accommodations** for students with disabilities. It makes me feel better that children with disabilities will be able to read typical children’s books, just as their peers.”

Out of the thirty-five participants’ responses, twenty-two (63%) contained the words understanding or know/knowledge. When answering the question, *How did your understanding of adapting books for students with disabilities evolve through this collaborative project?*, participants acknowledge that they did not know about the legislation and/or teaching practices they could utilize in their classroom to meet the needs of both inclusion students and students with learning disabilities in their classrooms. The qualitative data also shows participants did not understand the availability of options and ease when adapting books before the project but now do.

Theme: Confidence

The pre-service teacher candidates were asked specifically what influence they believed this project had on their future classroom practices. Research shows that the self-efficacy beliefs of teachers play a role in the incorporation of new teaching methods that could improve student learning (Takahashi, 2011). Thirty (86%) of the participants mentioned their increase in confidence level in working with students with disabilities during literacy instruction. Examples of student responses follow:

“My **confidence** evolved greatly because I am **confident** in adapting various types of books now.”

“At first, I was apprehensive of this project, but **after doing it I am confident** I understand how to adapt the books in my classroom and CAN do it. I am not concerned with doing this in the future now!”

“Adapting a book is much easier than it sounds. I had no clue at first that I could do this but **now I am confident** I can.”

“At the beginning, I had no idea where to start. **Now I am confident** I could sit down on my own and adapt a book for one of my future students.”

“In the beginning, I had no idea what this project would be like or how to adapt books. By the end, I’ve definitely developed a vast repertoire of adaptations and ideas. This knowledge **boosts my confidence level greatly!**”

The participant responses revealed that students learned ways to use adapted books as a part of their literacy instruction in an inclusion classroom.

Many did not realize that all books they used for literacy instruction might not be available to all of the students in their classrooms. After the project, the answers to the reflection questions suggest that the majority of the pre-service teacher candidates were confident that if not provided with tools such as adapted books or books on level for their students with learning disabilities, they can adapt books themselves.

Limitations

This research study took place in two college classrooms on one college campus involving 35 general elementary education pre-service teachers in two sections of a junior level literacy course. The time frame for the study was only three weeks within one semester. Extending the project over time with multiple sections of pre-service general elementary education majors could lend additional data supporting efficacy regarding supporting students with disabilities in future inclusive classrooms.

Discussion and Conclusions

The results from both the quantitative and qualitative data collected in this study suggest that the adapted book project increased pre-service teacher candidate attitudes of confidence and their self-efficacy in teaching students with disabilities. One implication for the future would be to repeat the study involving pre-service teacher candidates across several college campuses over a longer period of time. Another implication for the future could be more co-teaching at the university level to facilitate this level of understanding and confidence in pre-service teachers.

Determining that general education pre-service teacher candidates can increase self-efficacy beliefs through general and special education collaboration project participation may increase motivation and alleviate apprehensions they have about future inclusive classrooms. Students with disabilities are increasingly included in general education classrooms and knowledge and confidence in meeting their educational needs is an important part of the organization and planning of their instructional supports/needs. Federal law mandates students with disabilities have access to the general curriculum and appropriate instruction delivery of the knowledge and skills to be taught. Teaching pre-service teacher candidates ways to adapt their instructional tools to meet the needs of all of their students during literacy instruction is important for future students with disabilities in inclusive classrooms.

References

- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management* 38(1), 9-44.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 1-17. Retrieved on 5/25/2016 from <https://www.annualreviews.org/journal/psych>.
- Bandura, A. (1999). A social cognitive theory of personality. In L. Pervin, & O. John (Eds.), *Handbook of personality* (pp. 154-196). New York: Guilford.
- Bandura, A. (1988). Organisational applications of social cognitive theory. *Australian Journal of Management*, 13(2), 275-302.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Carroll, A., Forlin, C., & Jobling, A. (2003). The impact of teacher training in special education on the attitudes of Australian preservice general educators towards people with disabilities. *Teacher Education Quarterly*, 30(3), 65-79.
- Crowson, H. M. & Brandes, J. A. (2014). Predicting pre-service teachers' opposition to inclusion of students with disabilities: A path analytic study. *Social Psychology of Education*, 17, 161-178.
- Florian, L. (2009). Preparing teachers to work in schools for all. *Teaching and Teacher Education*, 25, 533-534.
- Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of grounded theory: Strategies for qualitative research*. New York: Aldine Publishing Company.
- Hudson, M.E., Browder, D., & Wakeman Shawnee. (2013). Helping students with moderate and severe intellectual disability access grade-level text. *TEACHING Exceptional Children*, 45(3), 14-23.
- Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (2004).
- Jordan, A., Schwartz, E., & McGhie-Richmond, D. (2009). Preparing teachers for inclusive classrooms. *Teaching and Teacher Education*, 25, 535-542.
- McHatton, P. A., & Parker, A. (2013). Purposeful preparation: Longitudinally exploring inclusion attitudes of general and special education pre-service teachers. *Teacher Education and Special Education*, 36(3), 186-203.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Publishers.
- No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002).
- Slaalvik, E.M., & Slaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99, 611-625.
- Tschannen-Moran, M., & Hoy, A.W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Tschannen-Moran, M., & Johnson, D. (2011). Exploring literacy teachers' self-efficacy beliefs: Potential sources at play. *Teaching and Teacher Education*, 27(4), 751-761.

- Takahashi, S. (2011). Co-constructing efficacy: A “communities of practice” perspective on teachers’ efficacy beliefs. *Teaching and Teacher Education, 27*(4), 732-741.
- Taylor, R. W., & Ringlaben, R. P. (2012). Impacting pre-service teachers’ attitudes toward inclusion. *Higher Education Studies, 2*(3), 16-23.
- U.S. Department of Health and Human Services & U.S. Department of Education. (2015). Policy statement on inclusion of children with disabilities in early childhood programs: Executive summary, 1-8. Retrieved on 1/20/2016 from: <http://www2.ed.gov/about/inits/ed/earlylearning/inclusion/index.html>

TEACHER CANDIDATES: TEACHING AND LEARNING WITH TECHNOLOGY TO IMPROVE LITERACY SKILLS AND PRACTICES

Nance S. Wilson

State University of New York at Cortland

Linda Smetana

California State University, East Bay

Dana Grisham

National University

Christine Widdall

State University of New York at Cortland

Abstract

The integration of technology into the K-20 classroom requires that teachers apply knowledge of content, pedagogy, and technology into literacy instruction. Models such as TPACK are helpful, but do not explicitly address the need for teachers to apply their knowledge of students' strengths and needs as they plan instruction. This article reports data that demonstrates how a new model of technology integration, the Metacognitive Technological Pedagogical Content Knowledge (M-TPACK), assists in building both teacher candidates and inservice teachers' understandings about literacy teaching practices. Through the experience of applying the M-TPACK framework, study participants were able to build a better understanding of their students' learning while using technology.

Technology present both opportunities and changes for teacher candidates (Grisham & Wolsey, 2007). The technological tools that we use, such as the iPad, the Internet, Voki, VoiceThread and others, offer varied techniques and challenges for learning and sharing literacy (Grisham, Lapp, Wolsey, & Vaca, 2014). With these multi-faceted technology tools, teacher candidates and practicing teachers can learn to apply technology strategies to literacy in different academic areas.

However, most classrooms have not achieved meaningful integration of technology (U.S. Department of Education [U.S. DOE], 2010). Meaningful technology integration requires that learning tasks look different from what traditionally occurs in the classroom. Students' use of technology should both enhance learning and redefine learning tasks in ways that have not yet been possible previously (Romrell, Kidder & Wood, 2014). Unfortunately, research suggests that teachers may primarily use technology for student homework (Project Tomorrow, 2011). Additionally, the use of technology in classrooms is highly dependent upon resources, as well as teacher's attitudes and beliefs, as teachers' "enact technology integration practices that closely align to their beliefs" (Ertmer, Otterbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012, p.432).

Pedagogical Frameworks that Focus on Technology Integration

Technological Pedagogical Content Knowledge (TPACK) is a framework to understand and describe the different kinds of knowledge teachers need to effectively use technology to enhance the learning process (Mishra & Koehler, 2006). In this framework, teachers are required to integrate what they know about technology, pedagogy, and content simultaneously to effectively and meaningfully teach with technology. This framework assumes that the teachers have the knowledge, skills, and dispositions to utilize technology in meaningful ways. This framework was build using Shulman's (1987) construct of pedagogical content knowledge (PCK).

However, these two frameworks do not formally recognize that teacher's knowledge of his/her students is essential to the teaching process (Shulman, 1987). Thus, the Metacognitive Technological Pedagogical Content Knowledge (M-TPACK) framework was developed to include the important components of teacher knowledge of their students as well as a teacher's disposition to be a metacognitive teacher (Wilson, Zygoris-Coe, Cardullo, & Fong, 2013). The M-TPACK positions teacher knowledge as the cornerstone of effective teaching and learning (See Figure 1) and the teacher is at the center of the framework.

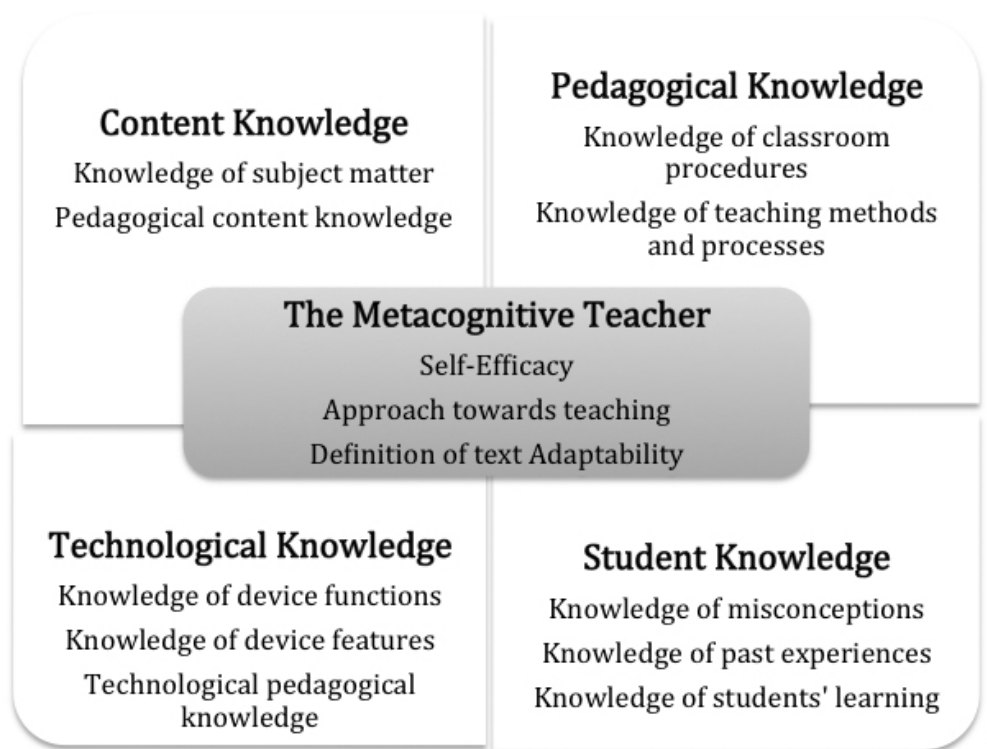


Figure 1. Metacognitive Technological Pedagogical Content Knowledge (Wilson, Zygouris-Coe, Cardullo, & Fong, 2013).

M-TPACK places the beliefs and dispositions of the teacher at the center of the framework and requires that teachers approach teaching and learning tasks metacognitively for effective decision-making to assure student learning. The metacognitive teacher responds immediately to unanticipated situations by making conscious and deliberate decisions (Duffy, Miller, Parsons, & Meloth, 2009). For example, the metacognitive teacher employs new teaching routines when recognizing that technology changes how information is processed and how student's knowledge and use of the technology meets such a change while assuring that students are learning the content.

Educators are embedded in a technological world. Preparing teachers to utilize technology for teaching literacy is key to providing them with the tools to utilize the M-TPACK framework to meet the needs of today's diverse student population.

Preparing Teachers to Use Technology Effectively

Due to the complexity of the integration of technology into teaching, it is key that we provide teacher candidates with opportunities to develop the knowledge, skills, and dispositions to effectively implement the M-TPACK framework in

their future classrooms. One technique that helps students to do this is to have them engage in generative technology projects.

Generative technology may be defined as the use of tools that are free or inexpensive, relatively easy to use, and provide meaningful applications to academic standards (Grisham & Smetana, 2011). The creation of generative technology projects builds teacher candidates' understanding of both technology and literacy teaching and learning. Teachers engaging with technology in the classroom must use all aspects of the M-TPACK framework to plan, teach, and reflect (Wilson et al., 2013).

Purpose of the Study

This research synthesis analyzed how both teacher candidates and inservice literacy teachers utilized technology for authentic literacy purposes and their perceptions of the interface between literacy instruction and learning with technology. The data analyzed included surveys, observations, reflective notes, projects, and artifacts.

Methods

A research synthesis is the practice of systematically distilling and integrating data from a variety of sources in order to draw more reliable conclusions about a given question or topic. In this paper, the researchers examined four recent studies of the use of technology for literacy and academic learning in various disciplines using grounded theory methodology. It was discovered that each of these studies contained themes and constructs of similar theories within their practice, thus initiating this grounded theory research project.

The researchers used the grounded theory because little was known and pre-existing research was limited in their field of inquiry as to how teacher candidates and inservice literacy teachers utilized technology for authentic literacy purposes and their perceptions of the interface between literacy instruction and learning with technology (Strauss & Corbin, 1994). However, in the grounded theory process, researchers can use existing literature to inform, explain, and contextualize their findings in theory and it allows for multiple data sources to be used as well as allows for preexisting studies to be analyzed to generate theory "where little is already known, or provide a fresh slant on existing knowledge" (Goulding, 1998, p. 51).

Participants

All of the participants were teacher candidates enrolled in university classes in literacy and/or technology with a strong focus on literacy instruction and learning.

These participants were attending state universities in two states with different certification requirements. There were a total of 95 teacher candidates.

Analysis

Data were coded and analyzed using grounded theory and the constant comparison approach (Boeije, 2002). The data for each of the four studies were first analyzed independently. Then the findings of each study were discussed to determine common threads, including common theories of practice in each study. Descriptive coding was used to identify emergent themes and constructs during analysis (Saldana, 2010). Triangulation was used with the intention to identify regularities in the individual studies (O'Donnoghue & Punch, 2003). Finally, the data were reanalyzed to determine the reliability of common threads and common theories.

Limitations

Due to the qualitative nature of a grounded theory study, certain components of trustworthiness and reliability were dependent on the integrity of the participants. Another key limitation in that data collected is subject to differences of interpretations. Coding, constant comparison, and triangulation of data was used to help decrease this limitation.

Control over exact time, physical location, and strict observation patterns by participants was not required in this study creating a limitation to the findings. In addition, all studies were completed in different locations, giving little control to environmental influences and individual preferences to deploying their research processes. Additionally, this was a small sample size.

Results

Study 1: Reading Strategies

The first study focused on teacher candidates' reading strategies and how to help them become active tablet readers, as prior research has shown that tablet reading is different than printed text reading (Wilson, Zygouris-Coe, & Cardullo, 2014). The participants were introduced to the idea of active reading through the use of text coding with modeling and guided practice with both paper and electronic coding. After this they were introduced to mobile computer-supported collaborated learning (mCSCL; Hsu & Ching, 2015) and shown how to use the application (App) called Subtext to text code or tag text electronically.

Subtext is an iPad App that allowed the teacher to purchase student accounts and then add reading assignments with tagging and discussion options. Subtext allowed students to actively text code before, during and after reading independently and collaboratively with peers. Subtext collected the tags for researcher's examination of student's individual and collaborative work.

During the initial stages of the study, participants independently practiced using text coding while reading a series of articles. Next, they text coded collaboratively with pen and printed materials. This was considered necessary as the pretest indicated 75% of the participants indicated that they did not have a strategic method for taking notes, sharing that they just hoped they would remember what they read. Thus, it was necessary to teach them text coding skills to help them improve their own comprehension when reading academic texts.

The second stage of the study transitioned the participants to the use of these same skills while reading electronic texts for comprehension on their tablets. Students were asked to incorporate the same skills to the tablet as they did in paper. The participants utilized text coding, both independently and collaboratively, using the iPads. The participants' codes were analyzed along with their perception of the text coding both for paper and tablet use.

Participants used the coding to identify criteria needed for writing assignments 79% of the time when working independently and 41% of the time when working collaboratively. They also coded items such as new words, Aha! Moments, questions, and pause and think prompts. The individual coding did not lead to pausing and thinking about the reading (1%); however, the collaborative reading did (31%) despite the fact that the overall coding was less when working together. Asking questions was only evident when participants read independently (4%); whereas, identifying a sentence that reminded them of another reading only occurred collaboratively (18%).

In analyzing these data, the findings are most interesting when examining, not the codes that students used independently or collaboratively, but in analyzing their writing responses to the readings. There was a noticeable improved quality in participant work and learning outcomes on their writing assignments. After working with the coding, participants' writing assignments moved from an average score of a 3.75/5 to a 4.25/5. The increase seemed to be connected to students being better able to synthesize knowledge across and within readings while creating and supporting original claims. Participants recognized this effect as 95% of them shared that the study helped them to become more aware of how reading comprehension might be changed if one is taught and uses text coding skills.

In addition to improving the participants' academic reading, the use of text coding expanded the participants' pedagogical knowledge about teaching

reading, technological knowledge about interactive reading on the iPad, and built an understanding of participants' knowledge as they engaged in the activity as students. Employing technology for learning helped 91% of the participants become more aware of how they read for comprehension when using a digital device as their reading platform. Participants (54%) also reported using text coding for other reading assignments in other university classes. Participants shared ideas such as, "When tagging and actively reading a text using a digital tool, I was able to follow along and understand it much more than I had been able to in the past." The participants' reflections also helped to highlight the development of their knowledge. One participant noted that "with reading on a digital device . . . I get more distracted by all the things that are occurring around me instead of focusing on the assignment." These teacher candidates recognized that they need to help their future students learn how to read on digital devices without giving into distraction. The use of digital tools to help build participants' academic literacy skills served as a first step in helping teacher candidates develop the dispositions and self-efficacy to be metacognitive as they build future lessons that integrate technology.

Study 2: Generative Technology

Generative technology requires that learners "use technology to satisfy their curiosity and to generate products that demonstrate and extend their learning" (Grisham & Smetana, 2011, p. 66). In this study, teacher candidates during their internship were encouraged to plan and teach using multi-modal composition in their teaching and to reflect on how this generative project impacted their thinking and teaching (Grisham, & Smetana, 2014). Two examples are seen below.

One candidate wanted a strategy that would aid his students in developing their skills in written composition. He knew that his students 'surfed' and played games on the web. So, he had his students create a website using the POWER (Plan, Organize, Write, Edit and Revise) writing strategy (Englert, Rafael, Anderson, Anthony, & Stevens, 1991) for the content of the website. He began with the learning outcome and chose a tool to complement the task.

The second candidate chose Voki, a free 2.0 webtool, and created a project where her struggling students would incorporate Voki into their work to create avatars to teach characterization in an urban high school English class. The students created avatars, who then read (voiced) their written compositions.

Both candidates used the components of TPACK (Mishra & Koehler, 2006) in their work, but we would argue that metacognition was a large part of their lesson plan development. Although TPACK is not explicit about teacher



Figure 2. Example of Flamingo Writers Workshop.

metacognition in planning technology-enriched instruction, these interns' desire to meet the learning needs of their secondary-level students was very much a part of the thinking and planning process. The M-TPACK framework makes this element of planning more visible to the teacher.

The findings of this study showed that teacher candidates were initially afraid to use new technology, but after sustained use of the chosen technology and presentations of their projects where they saw other candidates' projects, their attitudes improved. Additionally, the researchers conducted interviews with all 21 students and all but one teacher candidate expressed enthusiasm for applying technology to their teaching. Candidate reflections documented that their students were meaningfully engaged in literacy learning using new tools that resulted in positive attitudes toward the learning task and academic outcomes.

Employing technology in the service of learning is not a feat that can be accomplished by a lone teacher working in an isolated classroom in most instances. The researchers argue that effective technology use calls for thoughtful and sustained professional development. M-TPACK requires that teachers apply planning for learning, consider standards that are required, and include students' interests as a basis for the integrated lesson. As the examples provided above

indicate, in the hands of thoughtful educators, technology has the potential to engage and improve student learning.(see also Grisham & Wolsey, 2007).

Study 3: Vocabulary Self Collection Strategy Plus

Vocabulary has been an important area of reading that occurs primarily before reading and is often teacher centered and rote. Haggard (1982) developed Vocabulary Self-Collection Strategy (VSS) as a method to focus on post reading vocabulary development.

Study 3 extended VSS to VSSPlus by incorporating generative technology (Grisham & Smetana, 2011) to create online multimodal dictionary pages for chosen words using Thinglink (<https://www.thinglink.com/>) or PowerPoint® for presentation (Grisham, Smetana, & Wolsey, 2015).

Three researchers piloted VSSPlus in a fifth-grade classroom, collecting and analyzing data from both students and the classroom teacher. Researchers found that students had not been instructed in academic uses of technology, but that they learned quickly and adapted to what was available on the computer. The technology served as a catalyst for deeper reading of science text and extension of concepts as evidenced in their projects. One group of students thoroughly examined the scientific and precise implications of boiling point as represented on their Thinglink (see Figure 3). The content of the Thinglink confirmed that they had deeply learned the concept as each dot represents an indepth definition of a part of the boiling point process. Making the images interactive (although not visible in the figure) assisted students to talk over, select, implant, and explain the nature of the word.

6 - Boiling Point

zook.com © 2015 mcmets. app. 100 teachers

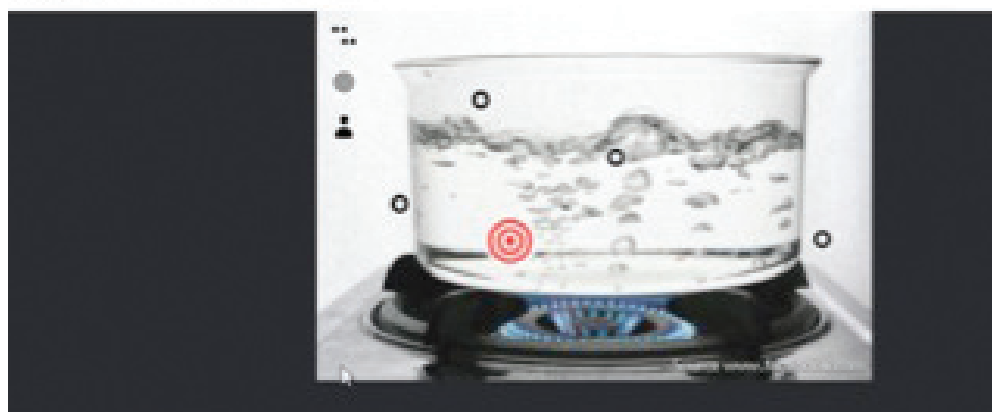


Figure 3. Thinglink Boiling Point Example.

The real value behind the VSSPlus approach is found in the repeated use of the target terms used in discussion, in rereading the text for deeper understanding, in finding an appropriate visual, in locating and arguing over an appropriate image and content, and in adding audio podcasts as they created their e-dictionary entries. Through the experience, students not only learned the meaning of their target term, but they explored the etymology and use of the term and worked to find just the “right” image. While the children were wildly enthusiastic about the technology and the project and definitely learned to nuance disciplinary terms, the effect on the teacher was even deeper. “I love how differently we can approach vocabulary than merely giving students a list and asking them to memorize it. Teaching vocabulary is really about inviting students into a realm of authentic exploration and discovery that will afford greater retention” (Grisham et al., 2015, p. 65).

The three researchers used TPACK for the planning of the VSSPlus project using two technological tools, PowerPoint® and ThingLink. This project helped to change the attitude of the classroom teacher about the use of technology in teaching and improved his knowledge of what motivated his students to learn, knowledge that he then carried forward in his teaching which is a direct application of M-TPACK.


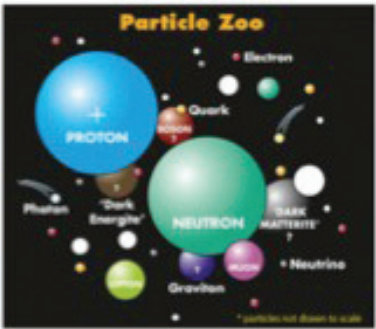
Study 4: VSSPlus with Teacher Candidates

To extend our knowledge about VSSPlus, the researchers conducted a study with 14 teachers and teacher candidates in K-12 content area classrooms where they were interning or student teaching (Grisham et al., 2015). Candidates during their internship were asked to plan, teach, assess, and reflect on the efficacy of the VSSPlus strategy. Candidates employed the VSSPlus strategy with their K-12 students to explore and document vocabulary learning through the compilation of visual dictionaries and classroom content resources. Data from the implementation of the VSSPlus strategy included candidate interviews, presentation of products, and written reflections. Teacher candidates were prompted to consult TPACK in planning their lessons. Two sample lessons are presented here.

In the first lesson, a teacher candidate at the upper elementary level used PowerPoint® for a group of students to learn the science concept of particles. She presented her students’ work to the group. Figure 4 shows the page that represented the focus word. The candidate was very motivated by the success of the lesson she had planned and stated that she was surprised by her students’ responses and how much they learned from the activity.

A second sample lesson, using Thinglink (<https://www.thinglink.com/>), was also a science lesson from a middle school teacher candidate and concerned the concept of bacteria and what they do, both positively and negatively for life.

Particles (Word Sift)

Scientists have discovered a menagerie of particles, and suspect that the universe contains many more — perhaps including particles of dark energy and dark matter. [Tim Jones]

Figure 4. PowerPoint Page for Definition of Particle Using PowerPoint and Word Sift.

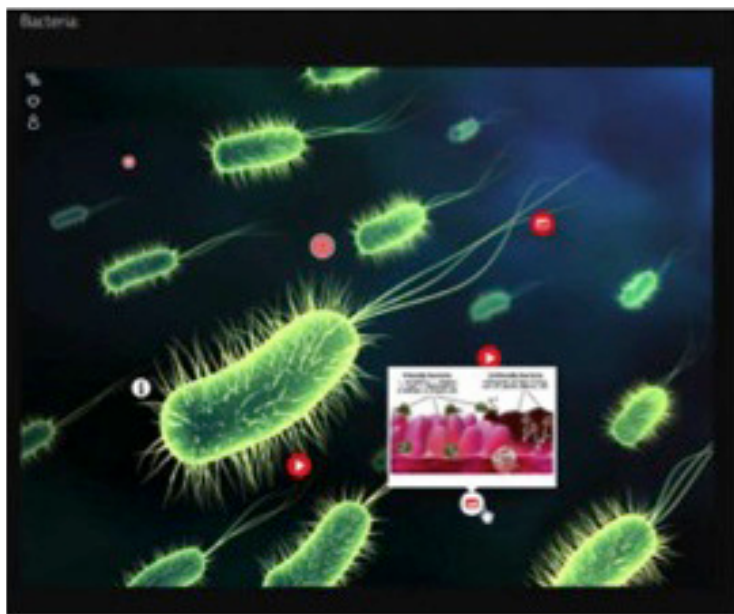


Figure 5. Middle School Thinglink on Bacteria

Again, in a print journal, it is not possible to show the entirety of the students' work in terms of video, audio, definitions, examples, and so on. However, the teacher reported that her students were entirely engaged with the lesson. She

learned that one could use technology which allow students to delve more deeply into science concepts without wasting time or losing control of the classroom.

Interviews with the candidates found that they believed VSSPlus was effective in engaging K-12 learners and helping them to really learn the science vocabulary and concepts. Teacher candidates during their internship reported success in K-12 student acquisition of content vocabulary and they found by including their knowledge of students in the planning process, they enhanced their students learning. Additionally, candidates learned from their peers' presentations and they discussed how technology might be used to improve other aspects of their teaching which is part of the M-TPACK model. Further, teacher candidates improved their own metacognition about teaching.

Research Synthesis

As noted above, each study was planned, conducted, and published separately. The researchers met at a conference to discuss the findings of each study and to determine common threads. Finally, the data were reanalyzed to determine the reliability of common threads (Strauss & Corbin, 1998). The following understandings from the analysis of these similar studies have emerged:

Theme 1: Technology builds an understanding of literacy practices and strategies. In each of the studies, the candidates learned that engaging with technology requires the use of literacy skills and strategies. In the first study, candidates learned how to use technology as a tool for active reading. In the second study, candidates developed technology foci to have students demonstrate literacy learning. In the third and fourth studies, technology was used as a tool to develop in depth vocabulary knowledge. Across these studies, the authors came to understand that in order to build 21st century literacy achievement for their candidates, teachers must learn to use technology as a tool in their teaching.

Theme 2: Teacher candidates and teachers engaging in literacy practices using technology develop an academic perspective for the use of technology for teaching and learning. The candidates in these studies all had the opportunity to use technology in ways that they may not have had previously. In the first study, candidates used technology for active reading, a task, that according to data collected prior to the study, was new to them. In the second study, candidates used technology for multimodal composition. Thus, the candidates were able to demonstrate how technology complements traditional teaching methods and develop an understanding that technology can be used for teaching and learning. In the third and fourth studies, technology was used to

explore and expand upon candidates' understanding of vocabulary. The focus of technology on these academic tasks demonstrates how generative technology is an important academic tool.

Building M-TPACK

In each of these studies, candidates experienced technology in ways that built, not just their knowledge of the technology, but of pedagogy, educational standards, content, and the needs of K-20 students while building their own understanding and experience of being a metacognitive teacher. In these four studies we found that the M-TPACK framework can assist teacher educators to improve the learning of our teaching candidates. M-TPACK is a useful tool for guiding the instruction of teacher candidates to integrate technology into their K-12 classrooms.

In the first study, candidates experience with technology helped to build their understanding of how to use technology to build literacy skills, thus improving their knowledge of pedagogy, content, technology, and students. Although these participants did not have the opportunity to demonstrate their disposition as a metacognitive teacher, the experience with the technology helped to build their understanding of the adaptability that is necessary to become a metacognitive teacher.

In the second study, the teacher candidates were provided with the opportunity to plan, teach, and reflect on a generative technology project to teach literacy in their K-12 classrooms. In this study, the candidates built technological knowledge as they chose tools and developed content, pedagogical, and student knowledge around the goals of the lesson and the technology. Throughout this implementation, the candidates had to be adaptive in their teaching to assure that goals and standards were met and that the use of the technology was effective. Thus, these candidates demonstrated the characteristics of a metacognitive teacher implementing generative technology.

The third study was a pilot in which fifth-grade students used a variation on the VSS (Haggard, 1982) to teach and reinforce post-reading vocabulary knowledge. A technological element was added to create the VSSPlus (Grisham et al., 2015). The teacher became more positive not only about technology use but about how his students could and would work positively (and in groups) to deepen their understanding of words and concepts. The change in the teacher's attitude reflects both a greater metacognitive understanding of his students and that he must work to adapt his teaching to their needs—part of which requires the use of technology.

In the fourth VSSPlus study, teacher candidates learned to use technology to build K-12 students' post-reading vocabulary knowledge. In planning both studies, TPACK (Mishra & Kohler, 2006) was used as a theoretical frame for the teachers. However, in implementation the researchers recognized that the teachers' ability to be metacognitive directly effected their knowledge of their K-12 students and this enhanced the implementation of the VSSPlus strategy. Candidates from the study reported an increased comfort level with the use of technology. They also stated that they learned that their K-12 students were receptive and engaged with the technology and with the task of understanding the words and concepts they needed to understand what they had read more deeply. In addition to the success of the tool and the task, the researchers noted that teachers had been "putting it all together" as we had hoped they would, and, in the process of this learning experience, they became more thoughtful (metacognitive) about their teaching.

Educational Significance

In each of these studies, teacher educators worked to build candidates' knowledge of technology, pedagogy, and content (TPACK), and in the process, they built their own knowledge of students and positioning as a metacognitive teacher. We believe these studies illustrate that effective teaching with technology is dependent upon the teachers metacognitive stance toward planning lessons, which utilize the M-TPACK framework.

These studies support other research about digital literacies (Leu, Kinzer, Coiro, Castek, & Henry, 2013), as they recognize that the spaces in which we construct literacy is evolving. Therefore, teacher educators must incorporate multimodal experiences for our candidates and our inservice teachers (Grisham & Smetana, 2014). Candidates need field experiences in their methods course that include individual and collaborative instructional projects that use technology in generative and authentic ways. Another implication is that in all of these studies, K-20 students were deeply engaged in the learning. Thus, learning about our students is key. Learning to be metacognitive in our teaching is essential for student success.

References

- Boelje, H. (2002). A purposeful approach to the constant comparison method in the analysis of qualitative interviews. *Quality and Quantity*, 36(4), 391-409.
- Duffy, G., Miller, S., Parsons, S., & Meloth, M. (2009). Teachers as metacognitive professionals. In D. Hacker, J. Dunlosky, & A. Graesser (Eds.), *Handbook of Metacognition in Education* (pp. 240-256). New York City, NY: Routledge.

- Englert, C., Rafael, T., Anderson, L., Anthony, H., & Stevens, D. (1991). Making writing and self-talk visible: Cognitive strategy instruction in regular and special education classrooms. *American Educational Research Journal*, 28, 2, 337-372.
- Ertmer, P., Otterbreit-Leftwich, A., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher's beliefs and technology intergration practices: A critical relationship. *Computers & Education*, 59, 1, 423-435.
- Goulding, C. (1998). Grounded theory: The missing methodology of the interpretivist agenda. *Qualitative Market Research: An International Journal*, 1(1), 50-57.
- Grisham, D., Lapp, D., Wolsey, T. & Vaca, J. (2014). Combining print and visual information via ePoster: Generating and displaying learning. *Journal of School Connections*, 5(1), 59-76.
- Grisham, D. & Smetana, L. (2011). Generative technology for teacher educators. *Journal of Reading Education*, 36(3), 12-18.
- Grisham, D., Smetana, L., & Wolsey, T. (2015). Post-reading development through VSSPlus. In T.Rasinski, R. Ferdig, & K. Pytash (Eds.), *Using Technology in the Teaching of Writing*, (pp. 64-71). Bloomington, IN: Solution Tree.
- Grisham, D. & Wolsey, T.(2007). Reconciling technology with literacy reform: Lessons from the field. *California Reader*, 40(4), 3-9.
- Haggard, M. (1982). The vocabulary self collection strategy: An active approach to word learning. *Journal of Reading*, 29(3), 204-210.
- Hsu, Y. & Ching, Y. (2015). A review of models and frameworks for designing mobile learning experiences and environments. *Canadian Journal of Learning and Technology*, 41(3), 1-21.
- Leu, D., Kinzer, C., Coiro, J., Castek, J., & Henry, L. (2013). New literacies: A dual level theory of the changing nature of literacy, instruction, and assessment. In Alvermann, D., Unrau, N., & Ruddell, R. (Eds.). *Theoretical models and processes of reading* (6th ed.), (pp. 1150-1181). Newark, DE: International Reading Association.
- Mishra, P. & Koehler, M. (2006). Technological pedagogical content knowledge: A new framework for teacher knowledge . *Teachers College Record* 108(6), 1017-1054.
- O'Donoghue, T. & Punch, K. (Eds.; 2003). *Qualitative and educational research in action: Doing and reflecting*. New York City, NY: Routledge.
- Project Tomorrow. (2011). The new 3 E's of Education: Enabled, engaged, empowered-How today's educators are advancing a new vision for teaching and learning. Retrieved from. http://www.tomorrow.org/speakup/speakup_reports.html.
- Romrell, D., Kidder, L. C., & Wood, E. (2014). The SAMR Model as a Framework for Evaluating mLearning. *Journal of Asynchronous Learning Networks*, 18(2), n2.
- Saldana, J. (2010). *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage.
- Shulman, L. S. (1987). Knowledge and teaching:Foundations of the new reform. *Harvard Educational Review*, 57 (1), 1-22.
- Strauss, A. & Corbin, J. (1998). *Basics of qualitative research: Grounded Theory procedures and techniques*, 2nd Edition. Thousand Oaks, CA: Sage.

- Wilson, N., Zygouris-Coe, V. & Cardullo, V. (2014). Trying to Make Sense of E-readers. *Journal of Reading Education*, 39(3), 36-42.
- Wilson, N., Zygouris-Coe, V., Cardullo, V., & Fong, J. (2013). Pedagogical frameworks of mobile learning technologies in education. In S. Keengwe (Ed.), *Pedagogical applications and social effects of mobile technology integration* (pp. 1-24). Hershey, PA : Information Science Reference, [2013]
- U. S. Department of Education, Office of Educational Technology. (2010). *Transforming American Education: Learning powered by technology*. Retrieved from. <http://www.ed.gov/technology/netp-2010>.