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THE TEXAS FORUM OF TEACHER EDUCATION

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Editor's Introduction

Educator preparation programs in the state of Texas and across the country have been under scrutiny for some time. Continual changes in policy, a lack of funding resources, unfunded state mandates, and higher accountability measures influence the profession on a daily basis. Despite this scenario, as teacher educators, the challenge is to keep advancing our mission of educating teachers to meet the complex realities of 21st century students and schools. To effectively embrace and serve, no matter what lies ahead in terms of policy changes, it is imperative to engage in scholarship that informs the profession and positively impacts K-12 student growth.

This edition of *The Forum* includes articles from scholars and practitioners who are implementing innovative and meaningful practices that better prepare preservice teachers for entry into the field and deepen K-12 students' learning experiences. As teacher educators, we are tasked with employing innovative and engaging research-based practices to deepen preservice teacher candidates' knowledge of teaching and learning. An article by Aimee Myers addresses the employment of meaningful digital tools to develop critical literacy as students engage in robust and meaningful sociocultural experiences. Karen Dunlap's article sheds light on the importance of teaching preservice teachers how to disaggregate testing data in order to create more effective instruction and meet specific K-12 student needs. Not only do teacher educators prepare preservice teachers to use evidence-based instructional practices to better facilitate student learning, we also ensure beginning teachers are prepared to deal with pressing social challenges. Over the past years, the issue of bullying behavior in schools has received a lot of attention. Katie Lewis and Lorraine Dinkel discuss the importance of providing more training to preservice teachers on preventing and addressing bullying in the K-12 classroom.

Even though educator preparation programs have limited time to teach the vast amount of information preservice teachers need to know before entering the field, we continue to find authentic and creative ways of deepening students' learning within our allotted time frame. To this end, Catherine Barber and colleagues discuss ways to maximize course learning experiences by implementing evidence-based strategies that assist preservice teachers in improving and deepening their academic writing ability.

Lindsey Vasquez and Jodi Pilgrim add depth to the current issue of *The Forum* with a follow-up to their 2017 study on teacher knowledge and skills needed to meet the needs of ELLs. Their current article reaffirms the importance of all students having opportunities to practice what they have learned in their coursework. Having the necessary content knowledge to pass a test is necessary for our preservice teachers but being able to transfer that knowledge to another situation in a different setting is critically important to their future success as educators.

As teacher educators, we must continue to examine impactful teaching practices that deepen K-12 student learning. Heather Olson-Beal and colleagues add perspective about finding authentic ways to teach writing, so students can be more positive and productive. John Kennedy and Jackie Vogel suggest that just because students are exposed to complex concepts and tasks, they may not use critical thinking skills to solve problems. These two articles provide insight into how teacher educators can approach structuring authentic activities in the classroom.

This issue concludes with two articles discussing the importance and value of developing and teaching care and compassion to colleagues and K-12 students. Ruben Garza and Jim Van Overschelde's article discusses how a Faculty Caring Instrument can be used to help preservice teachers assess their own degree of care and used to better understand and meet the needs of all students. Rebecca Fredrickson's article reaffirms the importance of modeling care and collaboration instead of competition in educator preparation.

It is our hope that this collection of manuscripts will inspire and promote critical discussions that enhance teacher preparation. We will continue to engage in meaningful work that improves the profession and positively impacts K-12 student success. In concert with Linda Darling-Hammond's recommendations, teacher preparation has the power to transform teaching and learning and we are doing it.

Respectfully,

Dr. Sarah McMahon

2018 Managing Editor

DEVELOPING CRITICAL CONSUMERS AND CREATORS: MERGING CRITICAL LITERACY WITH DIGITAL TOOLS

Aimee Myers

Texas Woman's University

Abstract

Moving students beyond functional literacy is needed now more than ever because of the constant influx of digital information. By merging critical literacy practices with students' digital experiences, we can support students in becoming critical consumers and creators of information. Students' experiences in the digital world can be an opportunity for educators to create a space for meaningful learning that develops democratic practices in the classroom. The article will explore the role of literacy in the digital age, while also offering practical examples for educators.

Keywords: critical literacy, 21st century learning, digital citizens, digital tools

In classrooms today, students are often looked upon as sponges as they passively absorb the knowledge teachers offer them. However, education in a democratic society demands that future citizens go through the academic pipeline as hammers rather than sponges. Like hammers, students should be able to break down information into its component parts for analytic purposes. Through the use of critical literacy, teachers should encourage the leaders of tomorrow to construct their own meaning and become critical consumers of digital information. This article will explore the digital experiences of today's 21st Century student, engage in a discussion of critical literacy's conceptual underpinnings, and connect critical literacy to the digital world through practical supports for the classroom.

Students in the Digital Age

The Bureau of Statistics (2014) reports that time spent during a student's day on digital devices is about 3.3 hours, while reading only counts for approximately .1 hours. In addition, students are accustomed to a world where they are constantly connected, sharing and communicating their thoughts with a simple click of a button. In 2015, 92% of young people reported accessing the Internet daily, and 71% of young people reported having multiple social media sites on which to share or post (Lenhart, 2015). Whether through *Instagram*, *Snapchat*, or *Twitter*, students are constantly revealing their lives through a social world they have created.

Many students also feel that posting on social media and connecting with others online helps shape their identity and development of self (Barker, 2009; Selwyn & Stirling, 2016). The impulses associated with "sharing" or "liking" or "commenting" are a part of our students' lived experiences. Because students are growing up in a digital world fixated on sharing, teachers should take advantage of this and allow students to share their classroom products. Through digital interactions with content, peers, and global perspectives, students can establish a sense of presence, identity, and ownership (Hall & Piazza, 2010; Kellner & Share, 2009). Through digital tools, students can interact with not only their entire class; but also, with students from around the world.

Despite student engagement with the digital world, 21st century students have classroom experiences that strongly contrast with the digital interactions they experience in their *real* world. Due to high-stakes testing environments, academic curricula have been narrowed to focus on test preparation (Supovitz, 2009). In addition, literacy development has become a

mandated school success initiative rather than a journey of learning (Campano, Ghiso, & Sánchez, 2013). The testing environment, which approaches learning as a mechanistic process for basic comprehension, has had a negative impact on literacy practices and how students view themselves as literate individuals (Dutro & Selland, 2012; Wolters, Denton, York, & Francis, 2014). Rather than supporting student ownership and engagement, students are often drowning in an environment of inauthentic assessments.

Foundations of Critical Literacy

Critical literacy can bridge the digital world and the world of the classroom by encouraging students to develop a sense of ownership and be actively involved in their education. Based upon fifteen years of work with teachers, Lewison, Leland, and Harste (2015) define critical literacy:

Critical literacy practices encourage students to use language to question the everyday world, to interrogate the relationship between language and power, to analyze popular culture and media, to understand how power relationships are socially constructed, and to consider actions that can be taken to promote social justice. (p. 3)

Rather than focus merely on the instrumental or linguistic aspects of literacy, critical literacy moves students deeper by encouraging them to examine the social, historical, and political context of both the reading and their own experiences. Through critical literacy, student engagement in sociocultural experiences becomes an intentional way of allowing a relevant and meaningful interaction with literacy skills to occur.

The instructional model for critical literacy developed by Lewison et al., (2015) can be used as a guide for utilizing classroom digital tools in a meaningful way. Through critical literacy, teachers build a curriculum based upon students' personal, social, and cultural experiences. These three areas are never isolated from the school curriculum. Interwoven within the critical literacy curriculum are the following critical social practices:

- disrupting the commonplace
- interrogating multiple viewpoints
- focusing on sociopolitical issues
- taking action and promoting social justice

These critical social practices merge with student digital experiences to create a critical literacy curriculum. By merging critical literacy with digital tools, teachers have the resources necessary to empower students to become critical consumers and creators of digital content.

Digital Tools for Supporting Critical Literacy

While educators might agree with the theoretical proposition of using digital spaces to encourage critical literacy, developing it within the classroom can seem like an overwhelming challenge. To encourage action, all learners - including adult learners- benefit from practical and concrete examples (Kopcha, 2012; Grossman & Salas, 2011). Exploring vetted, real-life classroom strategies for implementing critical literacy in the digital age can deepen the understanding of critical literacy and assist in actualizing the concept within the classroom. Each of the following sections offer a specific digital tool, a discussion of why the digital tool is valuable in supporting critical literacy, and an example of how to utilize the digital tool in a classroom.

BlendSpace

BlendSpace is a resource that educators may use as a method to curate resources. Many times, teachers want students to explore a topic through online research. While it is important for them to engage in web inquiry, the Internet is so vast it is easy for students to get buried in useless information. For students to explore a variety of resources covering a specific topic, teachers can review/identify credible sources and place them onto a *BlendSpace* page. *BlendSpace* pages can incorporate a variety of formats including news articles, blogs, PDFs, YouTube videos, and pictures.

The skill of interrogating an issue from multiple viewpoints is desperately needed in our current online environment. Utilization of *BlendSpace* can actually encourage an interaction between the text and the reader (Eason, Goldberg, Young, Geist, & Cutting, 2012). If the reader does not question the text, they are passively floating through the words. However, when the reader interacts with the text through questioning, he/she is constructing unique meaning and merging it with their own perspectives and social experiences.

A suggested process for the use of *BlendSpace* is to collect different sources all focused on one topic. For example, a specific sociopolitical issue like immigration could be a topic explored through the use of *BlendSpace*. Teachers could curate a variety of sources; each espousing a different stance on the targeted issue and share with their students who would then consider the who, what, when, where, and why of the digital texts (“Deconstructing Web,” 2012). This curation of sources in *BlendSpace* would allow students to practice analysis and evaluation skills necessary for the development of critical literacy. Students should consider the following in depth:

- 1) Who wrote this piece or established the website?
- 2) What is the purpose of the site or the text?
- 3) When was the text or site created?
- 4) Where does the information come from?
- 5) Why is this information valuable?

The emphasis on asking questions allows students the space to explore texts online within a framework that guides critical literacy. Likewise, teachers are not dictating to students the knowledge gained from the text; rather, students are constructing the knowledge together. Additional digital resources similar to *BlendSpace* can be found at *News ELA* and *EdTwist*.

Library of Congress Prints and Photographs Online Catalog

Students living in the digital age are incredibly visual and often have learned to communicate through a series of visuals. As a practice for the classroom, images can be “read” and analyzed in the same way students read and analyze texts (NCTE, 2005; Pantaleo, 2015; Schieble, 2014). Therefore, beginning with visuals, teachers can scaffold critical literacy practices. One particular tool for utilizing visuals is the *Library of Congress’s (LOC) Prints and Photographs Online Catalog*, which makes hundreds of their resources available on their website.

Helping students approach various sociopolitical issues through photography is one service offered through the *LOC Prints and Photographs Online Catalog*. Harste (2014) argued that the arts can connect to critiques of language, “Instead of thinking about literacy as a commodity...thinking about literacy as a social practice can be revolutionary” (p. 90). Harste’s work with students showed how using critical literacy as a social practice can be developed through the creation of multimodal literacies such as sketching, music, dance, and videos in a way that supports the growth of students’ analytical skills.

The *LOC Prints and Photographs Online Catalog* offers hundreds of historical photographs for students to engage in critical literacy practices. By allowing students to “read” these visuals, students can engage in analysis of the sociopolitical context of the photograph. A historical visual to encourage analysis from a critical literacy standpoint is Dorthea Lange’s photograph, “Migrant Mother.” This photo was taken in 1936 in a migrant farmers’ camp in California. The woman, who fled her family farm, is sitting inside an unstable tent, hand on her chin, lost in thought. She is surrounded by several dusty children with their faces buried in their mother’s drooping shoulders. Instead of the lecturing about the historical background of the photograph, we can encourage students to actively engage with the context of the photograph. Giving students a question prompt can help in the early stages of questioning. Using a prompt as simple as “I wonder...” can encourage student questions such as: “I wonder why she looks so distraught?”; “I wonder why the father is not there?”; “I wonder if those children belong to her?”; and “I wonder why the children look so frightened?”. These questions are driven by concrete evidence within the visual but later develop into abstract thinking about the sociopolitical context of the photograph. Additional digital resources similar to *LOC Prints and Photographs* can be found through the *TIME* magazine photo essays and the *Write About This* app.

Glogster

Glogster is a space where students can integrate both visuals and text to create content which advocates for an issue or topic. This integration of visuals and text allows students to develop a digital poster that can be shared and commented on by peers. Critical literacy encourages students to not just interrogate but also consider actions that can be taken to advocate for themselves or others. Exploring issues of social justice through critical literacy not only makes learning real-world applicable but also supports democratic ideas (Ciardiello, 2004; Kellner & Share, 2009; Noddings, 2013). In order to be democratic, our educational system must acknowledge all the working parts. There must be opportunities for students to analyze their own educative process and allow diverse perspectives to contribute to the conversation.

Glogster encourages the disruption of the common place by encouraging reflection over one's position and also creating a space for perspective sharing. Within the traditional classroom, the teacher stands as the authority. However, critical literacy practices encourage the teacher to critically reflect on their own position and power within the classroom. Digital spaces like *Glogster* assists in the decentralization of power and moves the teacher towards being a member of the learning community (Nandi, Hamilton, Harland, & Mahmood, 2015).

Teachers can allow students to discuss social issues from traditional literature read in class or allow them to brainstorm areas of society in which they could advocate. Once students have developed some of their ideas, they can begin to articulate their views on the social issue of their choice by piecing together visuals that represent the message they want to share. *Glogster* allows students to interact with critical literacy and the arts through a digital medium. Students are extending what they have read about a social issue into visuals that can create discourse within the classroom. Furthermore, creating a digital poster allows students to share their work with their own personal social media circle making their advocacy a part of their larger communal world. Additional digital resources similar to *Glogster* can be accessed through the apps *Padlet* and *Smore*.

StoryCorps.Me

The *StoryCorps.Me* App created by *National Public Radio* (NPR) can assist students by allowing them to create counter narratives to the status quo. In today's society, students are inundated with assumptions, stereotypes, and master narratives reflected in media, literature, and even in their own school textbooks; however, through critical literacy practices, teachers can create a space where students can question mainstream messages and offer an alternative narrative. In addition to encouraging agency in students, counter narratives can engage student voice and consequently model critical literacy practices by decentralizing the power of the teacher and exercising student voice. All members of the learning community are encouraged to share their knowledge and student knowledge is valued (Beeson, 2013; Godley & Loretto, 2013).

Montgomery (2014) researched fifteen third grade students who were exploring counter narratives. These counter narratives were based upon children's literature being read in class and were merged with the digital world via podcasts. Students created scripts for plays, interviews, and monologues to post on the podcast for all students in the class to hear. Montgomery reveals that not only did the third-grade students feel engaged by the podcast system for their counter narratives, but they also felt like they could have an impact on social issues by sharing their ideas through this digital medium.

NPR's *StoryCorps* began as a way to share every day American's stories. The broadcast is created by NPR staff, with the hope that it would encourage human connections between people. In the same vein as the *StoryCorps* broadcast, NPR created the *StoryCorps.Me* app. The difference is that the app is not limited to an NPR staff member conducting an interview. The *StoryCorps.Me* app is available to anyone who has a digital device. This app vastly broadens the space for sharing individual perspectives by allowing anyone with the app to interview someone and upload the interview where it becomes available to the public. Once the interview is uploaded and made public, it will also be archived by the *American Folklife Center* at the United States Library of Congress.

Animas High School in Colorado created a group project on *StoryCorps.Me* after three million gallons of toxic waste water flooded the Animas River. This project, “Voices from the Animas” was meant to share the unique stories of those living with the environmental disaster and break up the limited depictions created by the media. Students interviewed family members, individuals within the community and each other. In these interviews, individuals offer diverse and unique perspectives while also sharing thoughts on how this disaster impacted their thinking in regard to the environment. Animas High School utilized the “community” feature on the *StoryCorps.Me* app.

Through the “Community” feature the interviews are uploaded individually, but educators can create groups that enable students to create counter-narratives over a cohesive theme or access each other’s counter-narratives easily. It also allows listeners to see a cohesive movement among a certain group while still being able to access the individual counter-narrative. Additional digital resources similar to *StoryCorps.Me* can be found with the apps *Fotobabble* and *Podbean*.

Looking Forward

Technology is constantly on the move and new information from the digital world is continuously shifting. The amount of digital content is projected to double every two years, and students now have access to more than quadruple the amount of digital content and information they had previously (Gantz & Reinsel, 2011). In other words, the digital world will continue to grow. Students, now more than ever, must master the ability to question and adapt.

However, merely accepting digital resources into the classroom does not guarantee meaningful learning. While students are fully involved in the digital world, many still need to develop the critical literacy skills needed for citizenship within a democratic society (Bloom & Johnston, 2013; Mihailidis & Thevenin, 2013; Yin & Zhou, 2015). There are many digital programs that have been added to classroom curricula or school literacy programs that lack meaningful contributions to the learning process. Many of these programs are implemented as a “magic pill” to test scores.

It is important that education does not become technology rich, at the expense of becoming instructionally poor. For a digital resource to be meaningful, it must include elements of inquiry, problem-solving, student autonomy, collaboration, reflection, and real-world applications (Ertmer & Ottenbreit-Leftwich, 2013; Snape & Fox-Turnbull, 2013). Many school districts have attempted to stay at the forefront of technology through various avenues such as: Web 2.0 tools, technology bond issues, and placing a Google Chromebooks in every classroom. However, research shows superficial digital programs add little benefit to student success (Cheung & Slavin, 2013). When a teacher tosses in a website or adds a trendy technology to their curriculum, merely because they are attempting to meet a school or district mandate, it can become a part of a checklist mentality.

We must resist the urge to add digital resources that become nothing more than a digital worksheet or a digital lecture. An additive approach with technology is often times more harmful than good (Kuyatt, Holland & Jones, 2015; Lei & Zhou, 2007; Swallow, 2015). Technology must be utilized in a very intentional way that is meant to deepen or expand learning; otherwise, it can lead to student frustration. By engaging our students’ cultural knowledge of digital resources with our critical literacy practices, we can create a dialogical relationship in the classroom built upon shared, valued knowledge (Ng, 2012; Zammit, 2013).

To move beyond an additive approach, teachers can start with a few small steps. First, value all learners. Engage students in discussions about their digital lives and allow them to share in the collaborative investigation of meaningful digital tools. Second, process-wise, start small. Try to layer in one new digital tool each semester. Third, review the curriculum by using the critical literacy instructional model to adjust curriculum and support critical social practices. Fourth, make sure students are given all the support they need. Develop smaller scaffolding activities to help insure all learners successfully engage in critical literacy.

Conclusion

Educators today should view the digital world as both challenging and opportunistic. Students cannot partake in functional literacy and survive in the current digital world. Giroux (2010) argues that knowledge does not merely mean technical understanding or knowledge that can be measured in utility. This type of instrumental learning can lead to a dangerous future. Giroux asks us to consider the following question, “What kinds of education do young people need in order to become informed citizens capable of learning how to govern rather than simply be governed?” (p.380). In a world consumed with digital resources, critical literacy is necessary for students to become critical consumers of knowledge. Utilizing a critical literacy framework with digital resources in our classroom can provide us with an opportunity to engage and empower students for the 21st century.

References

- Barker, V. (2009). Older adolescents' motivations for social network site use: The influence of gender, group identity, and collective self-esteem. *Cyberpsychology & Behavior*, 12(2), 209-213.
- Beeson, M. W. (2013). Using podcasts to express counter-narratives: Meaningfully integrating technology in elementary social studies. *Journal of the Research Center for Educational Technology*, 9(1), 94-111.
- Bloom, K., & Johnston, K. M. (2013). Digging into YouTube videos: Using media literacy and participatory culture to promote cross-cultural understanding. *Journal of Media Literacy Education*, 2(2), 3.
- Bureau of Labor Statistics. (2014). [Graphic representation of hours per day in leisure and sports activities by youngest and oldest populations]. *American Time Use Survey*. Retrieved from <http://www.bls.gov/tus/charts/leisure>.
- Campano, G., Ghiso, M. P., & Sánchez, L. (2013). "Nobody knows the... amount of a person": elementary students critiquing dehumanization through organic critical literacies. *Research in the Teaching of English*, 48(1), 98.
- Ciardillo, A. V. (2004). Democracy's young heroes: An instructional model of critical literacy practices. *The Reading Teacher*, 58(2), 138-147.
- Cheung, A. C., & Slavin, R. E. (2013). Effects of educational technology applications on reading outcomes for struggling readers: A best-evidence synthesis. *Reading Research Quarterly*, 48(3), 277-299.
- Deconstructing Web Pages. (2012). *Media Smarts*. Retrieved from http://mediasmarts.ca/sites/mediasmarts/files/pdfs/lessonplan/Lesson_Deconstructing_Web_Pages.pdf.
- Dutro, E., & Seland, M. (2012). "I like to read, but I know I'm not good at it": Children's perspectives on high-stakes testing in a high-poverty school. *Curriculum Inquiry*, 42(3), 340-367.
- Eason, S. H., Goldberg, L. F., Young, K. M., Geist, M. C., & Cutting, L. E. (2012). Reader-text interactions: How differential text and question types influence cognitive skills needed for reading comprehension. *Journal of Educational Psychology*, 104(3), 515.
- Ertmer, P. A., & Ottenbreit-Leftwich, A. (2013). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning. *Computers and Education*, 64, 175-182.
- Gantz, J. & Reinsel, D. (2011). *Extracting value from chaos*. International Data Corporation (IDC). Retrieved from <https://www.emc.com/collateral/analyst-reports/idc-extracting-value-from-chaos-ar.pdf>
- Giroux, H. A. (2010). Dumbing down teachers: Rethinking the crisis of public education and the demise of the social state. *The Review of Education, Pedagogy, and Cultural Studies*, 32(4-5), 339-381.
- Godley, A. J., & Loretto, A. (2013). Fostering counter-narratives of race, language, and identity in an urban English classroom. *Linguistics and Education*, 24(3), 316-327.
- Grossman, R., & Salas, E. (2011). The transfer of training: What really matters. *International Journal of Training and Development*, 15(2), 103-120.
- Hall, L. A. and Piazza, S. V. (2010). Engaging with critical literacy: Reflections on teaching and learning. *English Journal*, 99, 91-94
- Harste, J. C. (2014). The art of learning to be critically literate. *Language Arts*, 92(2), 90-102.
- Kellner, D., & Share, J. (2009). Critical media education and radical democracy. In M. Apple, W. Au, & L.A. Gandin (Eds.), *The Routledge international handbook of critical education* (pp. 281-295). New York: Routledge.
- Kopcha, T. J. (2012). Teachers' perceptions of the barriers to technology integration and practices with technology under situated professional development. *Computers & Education*, 59(4), 1109-1121.
- Kuyatt, A., Holland, G., & Jones, D. (2015). An analysis of teacher effectiveness related to technology implementation in Texas secondary schools. *Contemporary Issues in Education Research*, 8(1), 63.
- Lei, J., & Zhao, Y. (2007). Technology uses and student achievement: A longitudinal study. *Computers & Education*, 49(2), 284-296.
- Lenhart, A. (2015). *Teens, social media & technology overview*. Pew Research Center- Internet & American Life Project. Retrieved from <http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015/>.

- Lewis, M., Leland, C., Harste, J.C. (2015). *Creating critical classrooms: Reading and writing with an edge*. (2nd ed.). New York: Routledge.
- Mihailidis, P., & Thevenin, B. (2013). Media literacy as a core competency for engaged citizenship in participatory democracy. *American Behavioral Scientist*, 57(11), 1611-1622.
- Montgomery, S. E. (2014). Critical democracy through digital media production in a third-grade classroom. *Theory & Research in Social Education*, 42(2), 197-227.
- Nandi, D., Hamilton, M., Harland, J., & Mahmood, S. (2015). Investigation of participation and quality of online interaction. *International Journal of Modern Education & Computer Science*, 7(8).
- National Council of Teachers of English (2005). *Position statement on multimodal literacies*. Retrieved from <http://www.ncte.org/positions/statements/multimodalliteracies>.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065-1078.
- Noddings, N. (2013). *Education and democracy in the 21st century*. New York: Teachers College Press.
- Pantaleo, S. (2015). Language, literacy and visual texts. *English Education*, 49(2), 113-129.
- Schieble, M. (2014). Reading images in American born Chinese through critical visual literacy. *English Journal*, 103(5), 47.
- Selwyn, N., & Stirling, E. (2016). Social media and education... now the dust has settled. *Learning, Media and Technology*, 41(1), 1-5.
- Snape, P., & Fox-Turnbull, W. (2013). Perspectives of authenticity: Implementation in technology education. *International Journal of Technology and Design Education*, 23(1), 51-68.
- Supovitz, J. (2009). Can high stakes testing leverage educational improvement? Prospects from the last decade of testing and accountability reform. *Journal of Educational Change*, 10(3), 211-227.
- Swallow, M. (2015). The year-two decline: Exploring the incremental experiences of a 1:1 technology initiative. *Journal of Research on Technology in Education*, 47(2), 122-137.
- Wolters, C.A., Denton, C.A., York, M.J., Francis, D.J. (2014). Adolescents' motivation for reading: Group differences and relation to standardized achievement. *Reading and Writing*, 27(3), 503-533.
- Yin, G., & Zhou, A. (2015). New media literacy education for children in the context of participatory culture: Deficiency and construction. *Cross-Cultural Communication*, 11(2), 26.
- Zammit, K. (2013). Using information and communication technologies to engage students in the later years of schooling in learning content and literacy: Case studies of three teachers. *Education and Information Technologies*, 18(2), 205-214.

DATA TALKS: CONVERSATIONS THAT GIVE PRESERVICE TEACHERS THE SKILLS THEY NEED TO ANALYZE AND IMPROVE INSTRUCTION

Karen Dunlap

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Abstract

Accountability policies impact the way educators use data within schools and subsequently, how educator preparation programs (EPPs) train new graduates. Unfortunately, while the value of data has become more prevalent in school settings, and the amount of field data available has expanded exponentially; preservice teacher training data utilization has the potential to lag significantly behind. Many teachers, especially preservice ones, feel overwhelmed and uncertain when they are tasked with reviewing standardized test score data and making appropriate interpretation/use of results in the classroom. Teacher educators debate the advantages and disadvantages of using testing data for interpreting student progress; yet, it remains clear that data has become a primary tool for measuring practicing teachers' effectiveness. The Data Chat instructional intervention is one practice-based model that addressed the need of data literacy proficiency among preservice teachers in an experiential manner. Participating students honed their skills in areas such as progress monitoring, appropriate student instructional placement, data-driven decision making, and reflective practice.

Keywords: preservice teachers, data literacy, experiential learning, data-driven instruction

Accountability practices and policies impact the ways in which educators use data within schools; and subsequently, how educator preparation programs (EPPs) train new graduates. Unfortunately, while the value of data has become more dominant and the amount of data available in the field has expanded exponentially; the training preservice teachers receive on effective utilization of that data often lags significantly behind (Piro, Dunlap, & Shutt, 2014). Currently, many EPPs do not explicitly address curricula using instructional practices that engage preservice educators in the practice of data literacy behaviors (Mandinach & Gummer, 2016). Teacher preparation programs have traditionally placed more emphasis on theoretical, rather than practical uses of data in preservice courses; potentially creating a systemic lack of adequately prepared teachers to effectively/accurately utilize data (Leńko-Szymańska, 2017; Creighton, 2007). Training novice teachers to understand, interpret, and use standardized testing data is necessary; as once teacher candidates become practicing educators, they are expected to disaggregate student data to improve the effectiveness of their practice (U.S. Department of Education, Office of Planning, Evaluation and Policy Development, 2011). Consequently, schools of education have a responsibility to include foundational training in the application of data-driven practices within their preservice educator courses of study (Mandinach & Gummer, 2013). Indeed, one problem that arises from expanded expectations for data use by professional teachers is how EPPs sufficiently prepare their graduates to productively use data for instructional interventions.

With major accountability measures tied to standardized testing scores, there has been a “shift to the age of big data” (Cibulka, 2012). NCATE’s 2010 call to action, *Transforming Teacher Education through Clinical Practice* promoted “implementing accountability systems based on assessment measures of graduates’ and programs’ performance through value-added and other measures in state and district longitudinal data systems” (p. 25). In a study of data-use with both practicing and preservice teachers, Reeves, Summers, Grove, and Boylan (2016) found that only 23% of preservice teacher

candidates with access to data systems reported having had formal coursework on the use of making data-driven decisions in their teacher education preparation programs. Engaging preservice teachers in environments that require the creation of instructional interventions as a common practice in teacher education coursework may become a non-negotiable skill expected of even the novice teacher. The author, based on research, defined the term, data literacy to mean the “ability to understand and use data effectively to inform decisions” (Mandinach & Gummer, 2013, p. 30; Mandinach, Honey, Light, & Brunner, 2008).

Many teachers, especially preservice ones, feel overwhelmed and uncertain when they are tasked with reviewing standardized test score data and making appropriate interpretation/use of the results in the classroom (Mertler, 2001). Novice teachers perceive themselves lacking the knowledge, skills, and confidence in data manipulation necessary to guide instructional decisions (Rogers, 2015). Assessment education, therefore, is needed to meet the demands of multiple stakeholders (DeLuca, 2012; DeLuca & Bellara, 2013; DeLuca, Chavez, Bellara, & Cao, 2013).

Classroom teachers have traditionally gathered data from readily available classroom sources, such as homework, in-class tests and anecdotal performance, to create instructional interventions (Brunner, et al, 2009). Such preferences may have originally stemmed from the fact that standardized test data were not collected specifically for diagnostic or formative purposes at the time; therefore, teachers may have responded to those data systems with hesitancy and distrust (Popham, 1999; Schmoker, 2000). Hence, there are disadvantages to the exclusive use of district-made or teacher-generated data for instructional interventions in teacher education programs. Such practices often reflect a narrow focus and they “report” only individual and case-by-case results rather than classroom or school-wide trends.

Teaching data literacy through summative assessments at the preservice level enhances the integrity of educational curricula via inclusion of measurement theory that addresses acquisition of skills essential for accurate data disaggregation from standardized/end-of-course state assessments. As in the cases of Australia, Finland and Singapore, summative assessment data was used to validate local assessments (Darling-Hammond, Wilhoit, & Pittenger, 2014). Consequently, teaching the use of standardized testing data may have significance for teacher education curricula as part of comprehensive data literacy outcomes now required in some state teacher performance standards.

Within the current accountability-oriented landscape, teachers must be able to use assessment data to monitor and scaffold student learning (DeLuca & Bellara, 2013). Since *No Child Left Behind* and *Race to the Top* accountability policies have been enacted in the United States, the public and their policymakers have come to depend upon standardized test scores for measures of accountability. Teacher educators debate the advantages and disadvantages of using standardized test results as a basis for individual accountability; yet, it remains clear that student performance on standardized tests has become a primary tool for measuring practicing teacher effectiveness. According to Piro et al., (2011), a majority of the states in the U.S. now use some form of student achievement measures to evaluate teachers. Teaching preservice educators how and when to analyze standardized student achievement data is simply a realistic and responsive practice in which teacher educators must learn to engage.

A major goal of teaching is the participation of students in the meaning-making process. Preservice teachers are expected to learn the conceptual foundations of subject-matter and how to deliver instruction to a diverse group of students. Additionally, they are expected to understand how individual students learn, what teaching strategies facilitate students’ learning and, within content, determine which topic-oriented instructional tools will best facilitate effective lessons. Each of these knowledge bases requires application and transfer to authentic site-based settings. In effect, teacher education must provide the scaffolding to help preservice teachers facilitate learner-centered classrooms where the influence of teaching on learning is considered to be a central outcome (Hakkinen et al., 2017).

Data Chat

Teacher education programs that promote learner-centered instruction by engaging preservice teachers in the real-world application of understanding, analyzing and using data for instructional interventions may be interpreted as valid,

practice-based, educational models (Wagner, Hammerschmidt-Snidarich, Espin, Seifert, & McMaster, 2017). Inspiring learner-centered instruction via the teaching of data literacy in a manner consistent with professional expectations is one essential component of a comprehensive, transformative teacher education curriculum that addresses the dual purposes of accountability and developmentally appropriate instruction.

The Data Chat instructional intervention is one such practice-based model that addressed the need of data literacy proficiency among preservice teachers. Through collaboration with a local school district, authentic, de-identified, classroom level state mandated test data was secured. Preservice teacher candidates were placed in small, collaborative groups according to his/her level of certification. For example, a student pursuing an Early Childhood-6 degree might be placed in a group working with a 3rd grade math data set; one pursuing 4-8 grade certification might work on a 7th grade social studies data set; and a student pursuing English 7-12 may work on the End of Course (EOC) English I data. Groupings were purposefully designed to help bridge theory to practice realities.

The Data Chat project involves a variety of steps. Students take a specific grade level/content area de-identified data set and:

- Identify strengths and weakness (whole class, disaggregated student groups, and individual students)
 - For areas of strength, identify strategies that may be used to maintain/enhance/encourage further exploration of the targeted subject/skill
 - For two challenging areas students are to:
 - identify research-based strategies to help students remediate misunderstood concepts and skills;
 - develop interventions/practices to use during instruction to address areas of student confusion or misunderstanding; and
 - create formative and summative assessments that could be used to monitor student progress/mastery of targeted skills.
- Design a presentation inclusive of data results applicable for delivery to one of three audiences:
 - School personnel (grade level, departments, cross curricular teams on a campus)
 - Parents
 - School administration such as School Board, District Officers, etc.

Prior to working directly with the classroom level data sets, undergraduate preservice teachers participated in scaffolded lessons where they became knowledgeable of (1) language/definition of terms utilized in state mandated testing and reporting, (2) basic statistical terms and procedures needed to correctly disaggregate and derive meaning from the data, and (3) research-based instructional strategies and procedures utilized to help struggling students master challenging test objectives. Once these tasks were accomplished, the experiential transfer of skills began.

A Case in Point: One Group's Journey

To illustrate, undergraduate students pursuing initial teacher certification were enrolled in an Instruction and Assessment course during the Fall 2017 semester. For the Data Chat Project, the instructor placed students in groups of three according to the specific degree classification. To facilitate collaboration, the instructor created Blackboard (Bb) student groups with full privileges associated (chat, file exchange, discussion board, task list, etc.). In this illustrative case, all group members were seeking a Bachelor of Science in Interdisciplinary Studies, Grades 4-8/ ESL. Each week a task contributing to completion of the final project was assigned to the group. This particular 4-8 ESL group chose to work with data from the state's 5th grade Science standardized test.

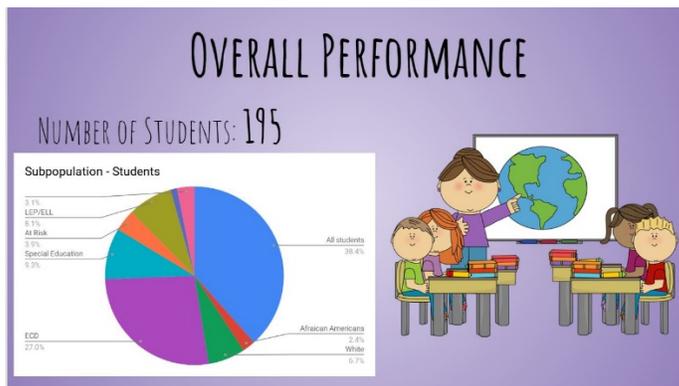
The group spent two weeks (inclusive of both in-class and online collaboration) disaggregating student test score results according to a variety of state criteria such as ethnicity, economically disadvantaged status, and academic groupings (Special Education, English as a Second Language, Gifted/Talented, etc.). The degree of academic progress was analyzed, and student group data were charted to identify areas of strength and challenge. As the areas of concern surfaced from test

data, the group examined the 5th grade science blueprint from the state released test version to locate category(ies) giving 5th grade learners the most trouble. Once these categories were known, the group began developing interventions to address the deficits.

For purposes of the Data Chat assignment, the group determined which two skills 5th graders had the most difficulty mastering on this particular science test administration. For each of the identified areas of weakness, a minimum of two relevant research-based instructional strategies that could potentially help students master the targeted skill(s) were selected and a rationale was written explaining why the chosen strategy(ies) were deemed appropriate. Next, to monitor student progress toward improvement/mastery of difficult concepts, the group was charged with developing two formative and two summative assessments to use during/following utilization of their instructional strategies.

The culminating Data Chat assignment was the creation of a presentation showcasing data results through an experiential lens. The group chose a specific audience (campus/grade level/department colleagues, district administration, or parents) for dissemination of information. Presentations were designed to:

- summarize basic data set information;
- include visual representations of student score disaggregation by ethnicity, academic grouping, and/or socio-economic status;



- highlight category(ies) of most challenging skills and suggested remediation strategies;

CHALLENGING QUESTION # 17

RCAT # - RCAT 4 The student will demonstrate an understanding of the structures and functions of living organisms and their interdependence on each other and on their environment.

SE 9A- Observe and describe the physical characteristics of environments and how they support.

We think, the issue pertained was the lack of knowledge of the different types of animals mentioned. More background knowledge is needed.

17 A student studying East Africa reads these facts about the Serengeti National Park in Tanzania.

Serengeti National Park

- The park covers an area of about 15,000 square kilometers.
- The landscape is mostly grasslands created by strong winds that blow away part of the soil.
- There are only a few scattered trees that are mostly acacia.
- Free and grazing by herbivores causes the development of herds.

The student thinks that parts of Texas are probably similar to the Serengeti. Based on the following descriptions, which of these Texas animals would be least likely to live in the Serengeti's grasslands?

<p>Burrowing Owl</p> <ul style="list-style-type: none"> • Small owl with long legs • Lives in areas with nearby species of short grasses • Often nests in abandoned rodent burrows 	<p>Pileated Woodpecker</p> <ul style="list-style-type: none"> • Large woodpecker; about 42 cm long • Feeds in mature trees in densely forested areas • Loud and destructive to trees
<p>Pronghorn</p> <ul style="list-style-type: none"> • Large herbivore; about 1 m tall at the shoulder • Lives in open areas with short plants to graze • Second-fastest land animal 	<p>Black-Tailed Jackrabbit</p> <ul style="list-style-type: none"> • Large rabbit with long ears • Lives in areas with short plants where predators are absent • Often lives in areas that have been grazed by herbivores

INSTRUCTIONAL STRATEGIES

Have students partner up and do a short presentation of Texas animals in national parks.

- Students will do research of a specific animal they choose.
- They will create a presentation of the specific animal they chose.
- They will present and inform their classmates of what they learned and know.
- Have a discussion of similarities and differences between all of them.



- provide explanations of formative and summative assessments for two challenging skills/concepts;

ASSESSMENTS FOR QUESTION

Formative: 

During the lesson, stop and ask students good questions that can help them find critical information about a certain animal. Example- Where does this animal live? What kind of food does it eat? Where does it sleep? What does it do during the day? What does it do at night? etc. Questions should motivate students to dig deeper in their research.

Summative:

Have students research an animal and the environment it lives in. Create a presentation that shows the animal and how the environment it lives in is supportive. Have a Q & A after each presentation.

- incorporate resources necessary for the targeted audience; and
- articulate findings in language appropriate for the targeted audience.

WHAT WE LEARNED

We learned about teamwork and how data in the classroom is important. We learned how perform item analysis and find the challenging areas based on if they approach, met or mastered the question. Furthermore, we also learned how to read a demographics report and figure out the number of students who performed in which areas (approaching/meets/and masters). In addition, we learned how to utilize instructional strategies to meet students needs more effectively. In conclusion, we grasped a better understanding of how to use different formative and summative assessments.

*above examples from a 5th grade science presentation. Used with permission.

Project Significance

Data Chat provided preservice teachers the opportunity to develop a new focus on synthesizing evidence for the betterment of informed decisions, instructional differentiation, and student achievement. This was a new mode of operation as preservice teachers had not yet been tasked with collecting, organizing, analyzing and using data for instructional

purposes/improvement. Participating students honed their skills in areas such as progress monitoring, appropriate student instructional placement, data-driven decision making, and reflective practice. Therefore, as accountability demands continue to rise at the local, state, and federal policy levels, perhaps Data Chat participants gained the foundational skills necessary to engage in data-based decision making beginning the very first moment they step into their own classroom.

References

- Brunner, C., Fasca, C., Heinze, J., Honey, M., Light, D., Mardinach, E., & Wexler, D. (2009). Linking data and learning: The grow network study. *Journal of Education for Students Placed at Risk*, 10(3), 241-267.
- Cibulka, J. (2012). How the use of data will transform educator preparation. *Quality Teaching*, 21(2), 1-4.
- Creighton, T. (2007). *Schools and data: The educator's guide for using data to improve decision making*. Thousand Oaks, CA: Corwin Press.
- Darling-Hammond, L., Wilhoit, G., & Pittenger L. (2014). Accountability for college and career readiness: Developing a new paradigm. *Education Policy Analysis Archives*, 22, 86. Retrieved from: <https://epaa.asu.edu/ojs/article/view/1724/1334>
- DeLuca, C. (2012). Preparing teachers for the age of accountability: Toward a framework for assessment education. *Action in Teacher Education*, 34(5-6), 576-591. DOI: 10.1080/01626620.2012.730347.
- DeLuca, C., & Bellara, A. (2013). The current state of assessment education aligning policy, standards, and teacher education curriculum. *Journal of Teacher Education*, 64(4), 356-372.
- DeLuca C., Chavez, T., Bellara, A., & Cao, C. (2013). Pedagogies for preservice assessment education: Supporting teacher candidates' assessment literacy development. *Teacher Educator*, 48(2), 128-142. DOI: 10.1080/08878730.2012.760024.
- Hakkinen, P., Jarvela, S., Makitalo-Siegl, K., Ahonen, A. Naykki, P., & Voltonen, T. (2017). Preparing teacher-students for twenty-first century learning practices (PREP 21): A framework for enhancing collaborative problem-solving and strategic skills. *Teachers and Teaching*, 23(1), 25-41.
- Lenko-Szymanska, A. (2017). Training teachers in data-driven learning: Tackling the challenge. *Language Learning & Technology*, 21(3), 217-241. Retrieved from: <http://llt.msu.edu/issues/october2017/lendo-szymanska.pdf>.
- Mandinach, E. & Gummer, E. (2016). What does it mean for teachers to be data literate: Laying out the skills, knowledge, and dispositions. *Teaching and Teacher Education*, 60, 366-376.
- Mandinach, E., & Gummer, E. (2013). A systemic view of implementing data literacy in educator preparation. *Educational Researcher*, 42(1), 30-37.
- Mandinach, E., Honey, M., Light, D., & Brunner, C. (2008). A conceptual framework for data-driven decision making. In E. B Mandinach & M. Honey (Eds.), *Data-driven School Improvement: Linking Data and Learning* (p. 13-31). New York, NY: Teachers College Press.
- Mertler, C. (2001). Designing scoring rubrics in your classroom. *Practical Assessment, Research & Evaluation*, 7(25), 1-10.
- Piro, J., Dunlap, K., & Shutt, T. (2014). A collaborative Data Chat: Teaching summative assessment data use in preservice teacher education. *Cogent Education* 1(1), DOI: 10.1080/2331186X.2014.968409
- Piro J., Wiemers, R., & Shutt, T. (2011). Using student achievement data in teacher and principal evaluations: A policy study. *International Journal of Educational Leadership Preparation*, 6(4), 1-9. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ974317.pdf>
- Popham, W. (1999). Why standardized tests don't measure educational quality. *Educational Leadership*, 56, 8-16.
- Reeves, T., Summers, K., Grove, E., & Boylan, M. (2016). Examining the landscape of teacher learning for data use: the case of Illinois. *Cogent Education*, 3(1). DOI: 10.1080/2331186X.2016.1211476.
- Rogers, M. (2015). *A developmental study examining the value, effectiveness, and quality of a data literacy intervention* (Doctoral dissertation). Retrieved from Iowa Research Online: <https://ir.uiowa.edu/etd/2004>
- Schmoker, M. (2000). The results we want. *Educational Leadership*, 57, 62-65.
- U.S. Department of Education, Office of Planning, Evaluation, and Policy Development. (2011). *Teachers' ability to use data to inform instruction: challenges and supports*. Washington, D.C.: U.S. Department of Education. Retrieved: www.ed.gov/about/offices/list/opepd/ppss/reports.html
- Wagner, D., Hammerschmidt-Snidarich, S., Espin, C., Seifert, K., & McMaster, K. (2017). Preservice teachers' interpretation of CBM progress monitoring data. *Learning Disabilities: Research & Practice* 32(1), 22-31.

THE ROLE OF EDUCATOR PREPARATION PROGRAMS IN BUILDING RELATIONSHIPS AND REDUCING BULLYING: CONSIDERATIONS FROM PRESERVICE TEACHERS' EXPERIENCES

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Abstract

With the success of the show 13 Reasons Why, school bullying was forced into the spotlight to be debated. For many years, researchers have been working on understanding the effect of school bullying on students' academic performance and the emotional toll. This study explores the impact of experiences and perceptions of preservice teachers with school bullying. The results indicate that school bullying is pervasive, including typical bullying on campus, relational bullying and cyberbullying. The influence of a positive adult on the campus is also explored. Finally, the role of educator preparation programs and the need for training is contemplated.

Keywords: bullying, positive classroom environment, student-teacher relationship, educator preparation program, preservice teachers

The most recent media depiction of bullying which leads to suicide is the Netflix series, *13 Reasons Why*. On May 18, 2018, Season 2 of this Netflix series became available for students to watch. In response to the reactions from the first season, the American School Counselor Association (ASCA) made available resources for how to address the issues related to this series. The first topic addressed is bullying (ASCA, 2018). The popularity of this series has highlighted the need for discussion and awareness of bullying with children and adolescents. *13 Reasons Why* is only the most recent media representation of a topic that has been present in schools for hundreds of years: bullying and the consequences in schools.

Bullying is unwanted, aggressive behavior that occurs between children, typically involving a real or perceived power imbalance (Centers for Disease Control and Prevention (CDC), 2015; U.S. Department of Health and Human Resources, 2018). Bullying has plagued K-12 schools for many generations; in addition to the typical bullying on campuses, cyber bullying or electronic aggression is a prevalent form of bullying among digital natives now. The forms of bullying are as many and varied as the impact on victims, ranging from academic problems and minor emotional or physical injury to life altering changes, including death (CDC, 2017).

Educator preparation programs (EPPs) have been charged with providing initial training for preservice teachers by the Texas Education Agency (TEA, 2017). Across the country, the damage bullying causes to victims and the school environment makes it difficult for children to learn (Blosnich & Bossarte, 2011; Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2013; Robers, Zhang, Morgan, & Musu-Gillette, 2015; CDC, 2015). The seriousness of the damage to students and the potential for bullying to be present in schools underscores the importance of the role teachers play in promoting a non-violent educational environment and being prepared with interventions (Craig, Bell, & Lescheid, 2011; Elinoff,

Chafouleas, & Sassu, 2004). Teachers are key in decreasing bullying behaviors as they often act as both the authority figure and a trusted mentor. Yet, current research suggests that practicing teachers and their preservice counterparts may not be prepared for their role in addressing bullying in the classroom and are uncertain how to address bullying, although they understand the importance of this knowledge (Bauman & Del Rio, 2006; Oldenburg, Bosman & Veenstra, 2016). EPPs are not providing needed training for preservice teachers related to the prevention and intervention of bullying in schools (Bauman & Del Rio, 2006; Craig et al., 2011) which impacts their preparedness to create safe caring learning environments essential for both student academic achievement and to address social emotional needs.

This research study explored the relationship between preservice teachers' experiences with bullying and positive teacher relationships during their own K-12 experiences. Additionally, the study explores the role of EPPs in preparing teachers to handle bullying. Researchers posed the following research questions in this mixed-methods study:

- 1) What types of bullying experiences, if any, did preservice teachers experience during their K-12 school experiences?
- 2) To what extent are preservice teachers' perceptions and experiences with bullying impacted by relationships with teachers or adults?
- 3) What methods should EPPs use to help prepare preservice teachers to handle bullying?

Experiences with Bullying

What is Bullying?

To be considered bullying, the behavior is repeated or has the potential to be repeated and the perpetrator and victim may have serious, lasting problems as a result of the behavior (Blosnich & Bossarte, 2011). Bullying is a prevalent problem in schools and includes the bully, the victim, and the individual that is both a bully and a victim (Blosnich and Bossarte, 2011). In 2014, the U.S. Department of Education reported that bullying occurred with 22% of the school population between the ages of 12 –18 years and occurred as often as *at least once a month* to a more sporadic occurrence of *on occasion*. Seven percent of this same population reported being cyber-bullied (Robers, et al., 2015). In 2015, the *Youth Risk Behavior Survey* indicated a range from 19.6% to 20.2% of students reporting having experienced being bullied which was a decrease from 2014 (CDC, 2015). A nationwide study completed by Florida Atlantic University and the University of Wisconsin-Eau Claire in 2017 indicated a sharp increase of 73% of students being bullied at some point during their K-12 experiences (Florida Atlantic University, 2017).

In 2007, Kowalski and Limber predicted that cyberbullying would become a significant challenge for teachers, as it impacts the classroom but happens off campus. Ten years later, researchers of the Florida Atlantic University and University of Wisconsin-Eau Claire determined that there is a significant overlap between online and school bullying. Eighty-three percent of the students who had been cyberbullied within a month of their study reported having been bullied at school as well. In August 2017, the Texas Legislature unanimously passed Senate Bill 179 (David's Law). This law amends the Texas Education Code so that a single significant act may constitute bullying rather than a series of events and requires districts to create policy to address all aspects of bullying. The law, for the first time, requires schools to act if the bullying occurs off school grounds, including through cyberbullying, if the student's educational environment is impacted or the rights of the victim are infringed (Childress, 2017).

Impact of Teachers on Reducing Bullying Behaviors

Bullying may inflict harm in multiple ways including physical, psychological, social, or educational (Gladden et al., 2013). One's ability to focus at school and feel safe is directly impacted by bullying behaviors (Blosnich & Bossarte, 2011; Gray, & Lewis, 2015). Teachers play a significant role in reducing bullying behaviors. For example, the simple presence of a teacher in the hallway reduces bullying behavior (Blosnich & Bossarte, 2011). Gutt and Randa (2016) found that an empathetic adult could minimize the bullying experience by lessening the impact. These findings support the idea that a caring adult is likely to help students feel more comfortable, even after a victimization (Gutt & Randa, 2016). Additionally,

students preferred teachers to be their primary source of support in terms of bullying prevention (Blosnich & Bossarte, 2011). In contrast, some studies found that some students have the impression that teachers and district personnel are passively disinterested or even unwilling to help, certainly not helpful resources (Agatston, Kowalski, & Limber, 2007; Mehta, Cornell, Fan, & Gregory, 2013). Yoon, Sulkowski, and Bauman (2016) found that teachers' reaction to bullying was tempered by their own experiences of bullying in their childhood and this affected their ability to evaluate the bullying situation and their resulting responses; this also resonated with previous research completed by Bauman and Del Rio (2006).

In 2006, Bauman and Del Rio found that teachers were more willing to discipline physical bullying since physical bullying had harm that was easier to assess. Ten years later, Yoon et al. (2016) still found this to be true, as physically bullying was seen as more severe and teachers continued to provide emotional support to victims.

Casas, Ortega-Ruiz, and Del Ray (2015) found that how teachers managed their classroom had a strong impact on inhibiting victimization of bullying. The teachers that were perceived as having an interest in students' wellbeing, by adopting a safe environment, being aware of needs, and providing consistent discipline contributed to preventing victimization (Casas, et al., 2015). Teachers' attitudes contribute to the school climate and a positive climate which provides academic and emotional support reduces bullying and raises academic and social competence (Espelage & Swearer, 2008; Yoon & Barton, 2008). In contrast, Grumm and Hein (2012) stated that an aggressive classroom climate disrupts the learning process and students tend to be uncomfortable and there is a higher association of bullying aggression (Casas et al., 2015).

According to Mehta et al. (2013), when student perceptions are that bullying is pervasive in a school, there were lower levels of student engagement. In addition, Cornell, Gregory, Huang, and Fan (2013) found when a prevalence of bullying was perceived, drop-out rates increased. Their results underscore that the prevalence of bullying is an important factor in high school academic performance. If the perception of the school climate for students includes that bullying is widespread, there is less commitment to succeeding at school and being engaged because of the fear (Mehta et al., 2013).

These studies support the need for preservice teachers to receive training from their EPPs, resulting in an ability to establish a classroom conducive to positive learning and academic support for students before an environment of aggression takes hold. The potential for teachers to impact bullying behaviors is recognized by the federal government. The Every Student Succeeds Act (ESSA) requires that states collect and include data about bullying, and school climate in their report cards (National Association of School Psychologists, 2017; National Education Association, 2015). The data are required to be made public, but it is optional for states to include these data as part of the accountability plan. States must include specific ways they will help districts address areas of concern, monitor school climate and reduce bullying and harassment. Federal funding is available to address these concerns through professional development activities, collaboration with community partners and increase personnel.

Role of Educator Preparation Programs

According to Craig et al. (2011), EPPs could assist with training on the identification of forms of bullying in order to help raise preservice teachers' knowledge and awareness of bullying. In addition, training regarding the specifics of prevalence, types, and impact is needed and would be welcomed by preservice teachers. Benitez Munoz, Garcia-Berben, and Fernandez-Cabezas (2009) found that EPPs needed to include training on bullying in order to raise self-efficacy levels in teachers. Teachers with higher levels of self-efficacy are more likely to be involved with bullies and victims (Yoon et al., 2016). Banas (2014) found that self-efficacy could be raised in preservice teachers' ability to perform bullying prevention activities when authentic learning exercises were used. The authentic learning experiences allow a preservice teacher to master the skill necessary for addressing bullying through practice.

Teachers are seen as key components to effective program and policy implementation (Bauman & Del Rio, 2006). As such, Bauman and Del Rio (2006) reported that EPPs need to focus on the importance of relational bullying within the scope of other forms of bullying to provide the much-needed information for preservice teachers to be prepared for handling situations of bullying on school campuses.

Since 2016, Texas Educator Preparation Programs have been required by 19 TAC §228.30(c)(3) to provide preservice teachers instruction related to mental health, substance abuse and youth suicide training. The exact nature of the training is left up to the EPP while the state provides some resources and guidelines (TEA, 2017).

Methods

Participants

Junior and senior undergraduate preservice teachers were selected for this study. The participants all attended a four-year university in South Texas. The student body of this university was 90% Hispanic with a high percentage of first-generation college students. Those who participated were enrolled in a course addressing the teaching of diverse student populations, a required pre-education course prior to formal admission to the College of Education with a common syllabus. This course has a field-based component requirement which is directly tied to the course assignments. Data were collected over the course of several semesters.

Survey Instruments

An online survey instrument was created by the researchers. The survey was divided into three sections: 12 demographic questions, 17 Likert-scale quantitative questions, and 4 open ended qualitative questions related to the respondents' perceptions and experiences with school violence (Lewis & Dinkel, 2017). The 5-point Likert-assessments were formatted using two different scales: 1 *Strongly Agree*, 2 *Somewhat Agree*, 3 *Agree*, 4 *Somewhat Disagree* and 5 *Strongly Disagree*; and 1 *Continuously*, 2 *Frequently*, 3 *Sometimes*, 4 *Once in a While* or 5 *Never*. This article focuses on the survey items related to bullying and preservice teachers' thoughts regarding their preparation for the field.

Results

Preservice Teachers

102 respondents completed the online survey instrument. Of the respondents, 85 (83.33%) of the participants were female, and 17 (16.35%) were male; 80 (78.43%) were between the ages of 18-25, 16 (15.69%) between the ages of 26-33, 4 (3.92%) between the ages of 34-40, 2 (1.96%) between 41- 46, and none 47 and older. 48 (47.06%) of the participants' native language was English and 54 (52.94%) of the participants' native language was Spanish.

Preservice Teachers Experiences with Bullying

Preservice teachers were asked to self-report on their experiences with school violence (encompassing all forms of violence): seventeen (16.83%) participants self-reported experiences during elementary school, 48 (47.06%) in middle school, and 52 (50.98%) in high school. Participants were then asked to differentiate types of school violence and focus on their experiences with bullying behaviors. This data indicated that participants experienced varying degrees of student-on-student bullying (Table 1). Participants experienced the highest rates of *continuous*, *frequently*, and *sometimes* bullying related to another student who made fun of them, calling them names or insulting them, and spreading rumors about them or trying to make others dislike them (Table 1). The data indicate that the second highest rate of bullying was related to another student spreading rumors about them or trying to make others dislike them (Table 1). The type of bullying least experienced by the participants was another student who made one do things he/she did not want to do, such as giving them money or other things of value, with 76.24% (77) of the participants *never* experienced this type of bullying.

Table 1

Preservice Teachers' Reflections on their K-12 Experiences with Other Students

	Continuously	Frequently	Sometimes	Once in a While	Never
<i>Did another student:</i>					
make fun of you, called you names, or insulted you, in a harmful way?	14 (13.86%)	21 (20.79%)	23 (22.77%)	19 (18.81%)	24 (23.76%)
spread rumors about you or tried to make others dislike you?	10 (9.9%)	18 (17.82%)	19 (18.81%)	18 (17.82%)	36 (35.64%)
threaten you with harm?	7 (6.93%)	12 (11.88%)	5 (4.95%)	16 (15.84%)	61 (60.40%)
push you, shove you, trip you, or spit on you?	7 (7%)	10 (10%)	10 (10%)	18 (18%)	55 (55%)
make you do things you did not want to do?	2 (1.98%)	1 (0.99%)	5 (4.95%)	16 (15.84%)	77 (76.24%)
exclude you from activities on purpose?	7 (6.93%)	10 (9.90%)	11 (10.89%)	14 (13.86%)	59 (58.42%)
destroy your property on purpose?	2 (2%)	8 (8%)	9 (9%)	12 (12%)	69 (69%)

Participants also reflected on their experiences with cyberbullying. The majority of the students reported *never* experiencing bullying related to the internet, texting, online gaming or other online communications (Table 2). Comparing data from Table 1 to Table 2, it indicates that the most frequent type of bullying was traditional bullying, not cyberbullying.

Table 2

Preservice Teachers' Reflections on their K-12 Experiences with Cyberbullying

	Continuously	Frequently	Sometimes	Once in a While	Never
<i>Did another student:</i>					
post hurtful information about you on the internet?	0 (0%)	1 (1%)	7 (7%)	18 (18%)	74 (74%)
purposefully share your private information, photos, or videos on the internet or mobile phones in a hurtful way?	0 (0%)	3 (3%)	4 (4%)	10 (10%)	83 (83%)
threaten or insult you through email?	0 (0%)	1 (1%)	3 (3%)	9 (9%)	87 (87%)
threaten or insult you through instant messaging or chat?	1 (1%)	3 (3%)	7 (7%)	14 (14%)	75 (75%)
threaten or insult you through online gaming or similar activities?	0 (0%)	0 (0%)	4 (4%)	7 (7%)	89 (89%)
purposefully exclude you from online communications?	2 (2%)	1 (1%)	6 (6%)	8 (8%)	83 (83%)

Participants focused next on the verbal bullying, related to hate-related words. For the most part, the participants did not report high levels (*continuously, frequently*) of hate-related bullying. Religion, ethnic background or national origin, disability, gender and sexual orientation had the highest rates of *never* experiencing this form of bullying (Table 3).

Table 3

Preservice Teachers' Reflections on their K-12 Experiences Related to Verbal Bullying

	Continuously	Frequently	Sometimes	Once in a While	Never
<i>During your K-12 school experiences in the U.S., did you experience anyone saying hate related words about:</i>					
your race?	3 (2.97%)	4 (3.96%)	18 (18.82%)	11 (10.89%)	65 (64.36%)
your social economic status?	5 (4.95%)	1 (.99%)	20 (19.80%)	13 (12.87%)	62 (61.39%)
your language?	3 (3%)	2 (2%)	14 (14%)	15 (15%)	66 (66%)
your religion?	3 (2.97%)	1 (.99%)	12 (11.88%)	15 (14.85%)	70 (69.31%)
your ethnic background or national origin?	1 (.99%)	1 (.99%)	6 (5.94%)	20 (19.80%)	73 (72.28%)
any disability you may have?	1 (1%)	1 (1%)	7 (7%)	7 (7%)	73 (72.28%)
your gender?	2 (1.98%)	1 (.99%)	7 (6.93%)	16 (15.84%)	75 (74.26%)
your sexual orientation?	0 (0%)	2 (2%)	5 (5%)	5 (5%)	88 (88%)

Tables 4 and 5 show the relationship participants had with both adults and teachers during their K-12 experiences. Due to attrition, only 100 participants responded to these questions. When asked if they felt “*teachers treated students with respect,*” 71 (71%) *strongly agree* or *somewhat agree*. Similar positive results were reported for the stem “*teachers cared about students,*” with 68 (68%) responding *strongly agree, or somewhat agree*.

Table 4

Preservice Teachers' Reflections on their K-12 Teacher-Student Relationships

	Strongly Agree	Somewhat Agree	Agree	Somewhat Disagree	Disagree
<i>Thinking about the teachers during your K-12 school experiences, indicate your response to the following:</i>					
Teachers treated students with respect	41 (41%)	30 (30%)	24 (24%)	3 (3%)	2 (2%)
Teachers cared about students	37 (37%)	31 (31%)	25 (25%)	7 (7%)	0 (0%)
Teachers did or said things that made students feel bad about themselves	6 (6%)	18 (18%)	19 (19%)	38 (38%)	19 (19%)

The majority of the participants indicated positive relationships with adults and teachers (Tables 4 & 5). 70% or higher of the participants strongly agreed that the adults really cared about you, told you when you did a good job, always wanted you to do your best, and believed that you would be a success (Table 5). 56 (55.45%) preservice teachers indicated that they had an adult who noticed when they were not there and 61 (60.40%) preservice teachers reported they had an adult who listened when you had something to say (Table 5).

Table 5

Preservice Teachers' Reflections on their K-12 Adult-Student Relationships

	Strongly Agree	Somewhat Agree	Agree	Somewhat Disagree	Disagree
<i>Thinking about the adults in your school, indicate your response to the following:</i>					
Adults really cared about you	73 (72.98%)	14 (13.86%)	12 (11.88%)	1 (.99%)	1 (.99%)
Adults noticed when you were not there	56 (55.45%)	15 (14.85%)	23 (22.77%)	5 (4.95%)	2 (1.98%)
Adults listened to you when you had something to say	61 (60.40%)	19 (18.81%)	16 (15.84%)	3 (3.97%)	2 (1.98%)
Adults told you when you did a good job	71 (70.30%)	14 (13.86%)	14 (13.86%)	1 (.99%)	1 (.99%)
Adults always wanted you to do your best	74 (73.27%)	16 (15.84%)	9 (8.91%)	1 (.99%)	1 (.99%)
Adults believed that you would be a success	71 (70.30%)	16 (15.84%)	12 (11.88%)	1 (.99%)	1 (.99%)

Preservice Teachers' Perceptions of Bullying

Participants completed open-ended questions focused on their perceptions of bullying. The sample size for this data set was 95, due to attrition. The data set was analyzed by the researchers. Each response and/or phrase was analyzed and coded. The codes were based on the main idea of the phrases, after which the researchers grouped the codes by similarities and identified overarching themes (Glesne, 2006; Rossman & Rallis, 2003). For the purposes of this study, the following open-ended questions were points of focus; "What do you feel are the most common types of school violence happening currently in the local area?", "What characteristics create a safe nonviolent classroom environment?", and "What could your educator preparation program do to help you be prepared to handle school violence?"

Several overarching themes emerged from the question stem, "What do you feel are the most common types of school violence happening currently in the local area? Coding indicated that physical fights, gangs, drugs and bullying are common types of school violence happening within the local area.

- 1) Preservice teachers felt that the violence was mostly physical fights. *"Physical fights between students and bullying."*
- 2) Preservice teachers felt gangs were a large contributing factor to school violence. *"I felt like there are more students being pressured into getting into a gang, getting into fights, and bullying."*
- 3) Preservice teachers viewed drugs as second significant factor in school violence. *"Students in secondary are becoming more aware of drugs and some are becoming more violent with bullying."*
- 4) Preservice teachers strongly felt bullying was a prevalent form of violence *"Bullying is probably one of the bigger issues locally. Only two years ago (or so), a young girl I knew from high school committed suicide after being continuously and viciously harassed online."*

The themes of physical fights, gangs, and drugs as forms of violence were all linked by the participants to bullying. This demonstrates the prolific nature of bullying within the local area. Participants differentiated cyberbullying from bullying. While the two forms were linked together some participants did make note of cyberbullying as a separate form. "Cyberbullying. Everything ends up online and people are set out to hurt others through this outlet."

An outcome that surfaced from the coding were the number of responses indicating the preservice teachers had feelings of despair/frustration that nothing is being done to stop the bullying within the schools. Some examples of the

participants' responses include: "They could be prevented if teachers identify the real problems students are experiencing and stop ignoring children when they come with an issue or complaint for as minimum as it may be." and "I feel that there is a lot of bullying in my local school area and nothing is being done about it." The preservice teachers also recognized that the students may not make the connection between their behaviors and the harm. An example of a participant's response, "I feel like kids are kids, they are young and don't realize the destruction they are causing to themselves and others."

Participants also responded to the question "*What characteristics create a safe, nonviolent classroom environment?*" Several themes were identified.

- 1) Preservice teachers felt teachers play a significant role in influencing student behavior. "Students must feel comfortable in their class by knowing that they can trust in their teachers. Also, if they see that the teachers protect them they will want to continue coming to school."
- 2) Preservice teachers believe that a caring environment focused on respect greatly impacts student behavior. "Making sure the students know that the teacher cares about them and will listen to them if they need help."
- 3) Preservice teachers felt a focus on communication between teachers and students is essential for creating a safe environment. "Good communication, trust, understanding and tolerance."
- 4) Preservice teachers believe that rules and order are essential to creating a safe secure environment. "A vigilant teacher, strict rules and consequences, educating students on their improper behaviors."

Finally, participants were asked "*What could your educator preparation program do to help you be prepared to handle school violence?*" Several themes emerged:

- 1) Preservice teachers expressed a desire learn more about the different forms of violence. "Continue to remind us all forms of what school violence is that not only does it entail major things like shootings."
- 2) Preservice teachers want more classroom management strategies which specifically address how to handle bullying behaviors. "I think they could prepare us how to deal with this sort of situation in the classroom, the procedures that should be taken, and what we can do to try to get rid of the tension that the students will still have after the bullying as not to let it happen again."
- 3) Preservice teachers believe role playing and practice scenarios would be beneficial. "Provide real life scenarios (hands on experiences and what-would-you-do type of exercises.)"
- 4) Preservice teachers find value in hearing from teachers who have experienced and responded to bullying situations. "Have teachers talk to us about ways they have handled bullying."
- 5) Preservice teachers recognized that a one-time session would not be enough to prepare them to handle bullying in schools. "Make sure we have quarterly trainings or follow ups where we could discuss problems and strategies."

Discussion

Results of this study show that preservice teachers experienced varying degrees of school violence, specifically bullying during their K-12. Preservice teachers experienced the least amounts of school violence during elementary school, with the numbers rising to about half of the participants during middle and high school. This is consistent with the findings of the U.S. Dept. of Education which found the lowest frequency rates in elementary schools (Gray & Lewis, 2015). The 2016 change to Texas Educational code to include language which indicates a single act may be considered bullying recognizes that student behaviors both on and off campus impact learning. In analyzing the data, it is evident that the majority of these participants have experienced bullying in K-12 (Tables 1-3).

Table 1 supports research findings that relational bullying is pervasive. Over 80% of participants had *sometimes* to *continuous/frequently* experienced bullying; Fifty-eight (57.42%) preservice teachers reported *continuous, or frequently* having someone make fun of them, called them names or insulting them (Table 1). Students spreading rumors about them or trying to make others dislike them was the second highest rate of bullying experienced by these preservice students (Table 1). This data is slightly higher than the numbers reported by the U.S. Department of Education which indicates that 22 percent of the school population, between the ages of 12-18, experiences bullying (Gray & Lewis, 2015).

Relational bullying, including hate-related bullying, was not as prevalent, but preservice teachers did report experiences across the entire Likert scale ratings (Table 3). The homogeneous nature of this region may have impacted on the overall lower levels of hate-related bullying. However, relational bullying was present as evidenced by the quantitative (Table 1 & 2) and qualitative data. One participant stated, “I feel that socioeconomic status may cause a bullying or make feel someone less than the others. Language is also a big issue when it comes to bullying because people may laugh at your accent.”

Cyberbullying was not a large concern for this group of preservice teachers with the majority of them reporting *never* to have experienced bullying related to the internet, texting, online gaming or other online communications during their own K-12 experiences (Table 2). With the influx of cyberbullying in schools (Kowalski & Limber, 2007; Mehta et al., 2013), one would have expected this number to be higher, especially as the age of the majority of participants fell into the bracket of 18-25 year olds.

After reflecting on their own K-12 experiences, preservice teachers shared their views of the current situation of violence in schools. Bullying was the most prevalent form of violence currently seen in the schools and is seen to be interwoven with the others forms of violence (physical fights, gangs, and drugs) according to the preservice teachers. This supports the research which shows that there are various forms of bullying, and relational bullying is predominant within schools (Bauman & Del Rio, 2006; Blosnich & Bossarte, 2011, TEA, 2017).

Data indicated for the most part that preservice teachers felt that they had an adult or teacher who supported them (Tables 4 & 5). Ninety-five percent (95%) of the preservice teachers strongly agree or agree that the teachers treated students with respect; 93% felt that the teachers cared about students (Table 4). Fifty-six (55.45%) preservice teachers indicated that they had an adult who noticed when they were not there; 61 (60.40%) preservice teachers reported they had an adult who listened when you had something to say (Table 5). The feeling that teachers care about students and treat students with respect has been shown to be a critical influence in the reduction of bullying behaviors (Blosnich & Bossarte, 2011; Casas et al., 2015; Espelage & Swearer, 2008; Gutt & Randa, 2016; Yoon & Barton, 2008).

Research indicated that one’s personal experiences with bullying influences how one addresses bullying in the classroom (Bauman & Del Rio, 2006; Yoon et al., 2016). Findings in this study indicate that the majority of participants experienced a form of bullying at some point during their K-12 schooling and the majority of the participants were impacted by a positive relationship with a teacher or adult. Teachers who treat students with respect, are caring towards students, notice a student’s absence, are available to listen, praise and believe in the students are all positive dispositions which are key to developing student-teacher relationships and creating a positive classroom environment. Overwhelmingly, the data indicates these participants were positively impacted by a teacher/adult in their school (Tables 4 & 5). These characteristics of teacher behaviors are supported by the research as critical to good classroom management and providing a class climate that is conducive to learning and a positive environment, reducing the likelihood of bullying situations (Casas et al., 2015; Espelage & Swearer, 2008; Yoon & Barton, 2008).

Yet, 43 (43%) of the participants indicated that they strongly agree, somewhat agree, or agree that the teachers did or said things that made students feel bad about themselves. This data suggests that not all preservice teachers experienced the safe caring learning environment connected to positive teacher relationships. Similarly, in the research, students express a lack of teacher caring behaviors or a false sense caring attitudes (Agatston et al., 2007; Grumm & Hein, 2012; Mehta et al., 2013).

Participants connected the reduction of bullying behaviors to the role of teachers in the qualitative data. For example, one participant wrote, “They could be prevented if teachers identify the real problems students are experiencing and stop ignoring children when they come with an issue or complaint for as minimum as it may be.” This sentiment is reflected in the literature where teachers express a lack of training to handle bullying (Banas, 2014; Benitez Munoz et al., 2009; Craig et al., 2011). Bullying is a complex and dynamic problem which has been recognized by the Department of Education as well as the need to provide teachers with the tools to address bullying (TEA, 2017).

One element of reduction in bullying behaviors is the teacher's creation of and maintaining a safe caring learning environment. (Casas et al., 2015; Esplage & Swearer, 2008; Gutt & Randa, 2016). The preservice teachers identified several characteristics of what contributes to a positive classroom environment, including; rules, order, communication, caring, and respect, all of which centered on the role that the teacher plays. These findings align with research showing the pivotal role a teacher plays in reduction of bullying behaviors (Casas et al., 2015; Esplage & Swearer, 2008; Gutt & Randa, 2016). Based on the data, it appears that the topic of how to create safe caring learning environments is being addressed in the EPP involved in the study. Understanding the characteristics of a safe caring learning environment is essential to reducing bullying behaviors.

Research suggests professional development focused on bullying should include forms of bullying, specific examples of the prevalent types, and the impact of bullying behaviors on the student and school environment (Craig et al., 2011). Texas Education Agency recognizes this need and 19 TAC §228.30(c)(3) requires EPPs to provide training for preservice teachers but leaves the specifics to the discretion of the EPP (TEA, 2017).

Participants responded to "how they felt their educator preparation program could help prepare the students for school violence." Five themes emerged: a need for training focused on the different forms of violence, classroom management strategies for handling bullying, role -playing and scenarios as well as opportunities to review real incidences of bullying and hearing from current teachers on how they handled the behaviors. Finally, preservice teachers recognized that they need ongoing training focused on ways to address bullying in the classroom. These suggestions of ways to prepare preservice teachers mirror the research findings which identify areas of training including authentic learning experiences as well as direct instruction (Banas, 2014; Bauman & Del Rio, 2006; Benitez Munoz et al., 2009; Craig et al., 2011; TEA, 2017). The National Center on Safe Supportive Learning Environments created the Training Toolkit: Creating a Safe and Respectful Environment in Our Nation's Classrooms (Safe and Supportive Schools Technical Assistance Center, n.d.). This toolkit focuses on helping teachers create and maintain the safe learning environment and was created with the intention of providing well rounded professional development for teachers. This might be a good starting point for EPPs as the two modules address the many facets of bullying as supported by current literature and this study.

Conclusion

Findings of this study show a positive relationship between preservice teachers own experiences with bullying and their perceptions of the role that a teacher plays in reducing bullying behaviors. An established safe caring learning environment along with positive student-teacher relationships directly impact the reduction of bullying behaviors. Preservice teachers recognized that teachers do not always seem to address bullying and indicated a desire to learn strategies to be prepared to handle bullying behaviors in the classroom. The critical role teachers play in reducing bullying behaviors is recognized within *ESSA*, and the Texas Education Agency code which requires EPPs to provide training to preservice teachers related to school health issues; including bullying. However, a gap still exists between the EPPs and the level of preparedness that preservice teachers are entering the field in regarding to addressing bullying. Future research should address this need and provide guidance for EPPs as to how to identify specific training requirements so that preservice teachers are graduating with the skills needed to recognize and address bullying behaviors in the classroom.

References

- American School Counselor Association. (2018). *How to address issues related to "13 Reasons Why" within a comprehensive school counseling program*. Retrieved from <https://www.schoolcounselor.org/asca/media/asca/FactSheets/13ReasonsWhyComprehensive.pdf>
- Agatston, P. A., Kowalski, R., & Limber, S. (2007). Students' perspectives on cyberbullying. *Journal of Adolescent Health, 41*, S59-S60.
- Banas, J. R. (2014). Impact of authentic learning exercises to preservice teachers' self-efficacy to perform bullying prevention tasks. *American Journal of Health Education, 45*, 239-248.
- Bauman, S., & Del Rio, A. (2006). Preservice teachers' responses to bullying scenarios: Comparing physical, verbal, and relational bullying. *Journal of Educational Psychology 98*(1), 2019-2031.
- Benitez Munoz, J. L., Garcia-Berben, A., & Fernandez-Cabezas, M. (2009). The impact of a course on bullying within the preservice teacher training curriculum. *Electronic Journal of Research in Educational Psychology, 7*(1), 191-207.
- Blosnich, J., & Bossarte, R. (2011). Low-Level violence in schools: Is there an association between school safety measures and peer victimization? *Journal of School Health, 81*(2), 107-113.
- Casas, J. A., Ortega-Ruiz, R., & Del Ray, R. (2015). Bullying: The impact of teacher management and trait emotional intelligence. *British Journal of Educational Psychology, 85*, 407-423.
- Centers for Disease Control and Prevention. (2015). *Trends in the Prevalence of Behaviors that Contribute to Violence on School Property, National YRBS: 1991-2015*. Retrieved from https://www.cdc.gov/healthyouth/data/yrbs/pdf/trends/2015_us_violenceschool_trend_yrbs.pdf
- Centers for Disease Control and Prevention. (2017). Bullying research. Retrieved from <https://www.cdc.gov/violenceprevention/youthviolence/bullyingreach>
- Childress, J. (2017). David's law combats bullying in schools. Retrieved from <https://www.legaldigest.com/davids-law-combats-bullying-in-schools>
- Cornell, D., Gregory, A., Huang, F., & Fan, X. (2013). Perceived prevalence of teasing and bullying predicts high school dropout rates. *Journal of Educational Psychology 105*(1). 138-149.
- Craig, K., Bell, D., & Leschied, A. (2011). Preservice teachers' knowledge and attitudes regarding school-based bullying. *Canadian Journal of Education, 34*(2). 21-33.
- Elementary and Secondary Education Act of 1965, as amended by P.L. 155-224; (2018).
- Elinoff, M. J., Chafouleas, S. M., & Sassu, K. A. (2004). Bullying: Considerations for defining and intervening in school settings. *Psychology in the Schools 41*(8), 887-897.
- Espelage, D. L., & Swearer, S. M. (2008). Current perspectives on linking school bullying research to effective prevention strategies. In T.W. Miller (Ed.) *School violence and primary prevention* (pp. 335-353). New York, NY: Springer-Science and Business Media
- Florida Atlantic University. (2017). Nationwide teen bullying and cyberbullying study reveals significant issues impacting youth. *ScienceDaily*. Retried from www.sciencedaily.com/release/2017/02/170221102036.htm
- Gladden, R. M., Vivola-Kantor, A. M., Hanburger, M. E., & Lumpkin, C. D. (2013). *Bullying surveillance among youths: Uniform definitions for public health ad recommended data elements*. Version 1.0, Atlanta, GA; National Center for Injury Prevention and Control, Centers for Disease Control and Prevention and U.S. Department of Education. Retrieved from <http://www.cdc.gov/violenceprevention/pdf/bullying-definitions-nal-a.pdf>.
- Glesne, G. (2006). *Becoming qualitative researchers: An introduction* (3rd ed.). Boston: Pearson Education.
- Gray, L., & Lewis, L. (2015). *Public School Safety and Discipline: 2013-14 (NCES 2015-051)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubs2015/2015051.pdf>
- Grumm, M., & Hein, S. (2012). Correlates of teachers' ways of handling bullying. *School Psychology International 34*(3). 299-312.

- Gutt, T. A., & Randa, R. (2016). The influence of an empathetic adult on the relationship between bullying victimization and fear at school. *Journal of Crime and Justice*, 39(2), 282-302.
- Kowalski, R. M., & Limber, S. P. (2007) Electronic bullying among middle school students. *Journal of Adolescent Health*, 41, S22-S30.
- Lewis, K.D., & Dinkel, L.M. (2017). Impact of perceptions and experiences on preservice teachers' levels of self-efficacy to handle school violence. *Critical Issues in Teacher Education*, XXIV, 99-107.
- Mehta, S. B., Cornell, D., Fan, X., & Gregory, A., (2013). Bullying climate and school engagement in ninth-grade students. *Journal of School Health* 83(1). 45-52.
- National Association of School Psychologists. (2017). *The every student succeeds act: Details of the new law*. Retrieved from <https://www.nasponline.org/research-and-policy/current-law-and-policy-priorities/policy-priorities/the-every-student-succeeds-act/details-of-essa>
- National Education Association. (2015). *ESSA Fact Sheet: Student and school safety/bullying prevention*. Retrieved from <http://www.nea.org/assets/docs/ESSA%20Fact%20Sheet%20-%20Student%20and%20School%20Safety%20121415.pdf>
- Oldenburg, B., Bosman, R., & Veenstra, R. (2016). Are elementary school teachers prepared to tackle bullying? *School Psychology International*, 37(1). 64-72.
- Robers, S., Zhang, A., Morgan, R.E., and Musu-Gillette, L. (2015). *Indicators of school crime and safety: 2014*. National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC. Retrieved from <https://nces.ed.gov/pubs2015/2015072.pdf>
- Rossmann, G. B., & Rallis, S. F. (2003). *Learning in the field: An introduction to qualitative research* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Safe and Supportive Schools Technical Assistance Center (n.d.). *Understanding and intervening in bullying behavior: workshop overview, preparation guide, and trainer's outline*. Retrieved from <https://safesupportivelearning.ed.gov/creating-safe-and-respectful-environments-our-nations-classrooms-training-toolkit>
- Texas Education Agency. (2017). *Program provider resources*. Retrieved from http://tea.texas.gov/Texas_Educators/Preparation_and_Continuing_Education/Program_Provider_Resources
- U.S. Department of Health and Human Resources. (2018). *What is bullying?* Retrieved from <https://www.stopbullying.gov/what-is-bullying/index.html>
- Yoon, J. S., & Barton, E. (2008). The role of teachers in school violence and bullying prevention. In: T.W. Miller (Ed.) *School violence and primary prevention*. Springer, New York, NY.
- Yoon, J., Sulkowolski, M. L., & Bauman, S. A. (2016). Teachers' responses to bullying incidents: Effects of teacher characteristics and contexts. *Journal of School Violence*, 15, 91-113.

IMPROVING TEACHERS' WRITING: AN EVIDENCE-BASED INSTRUCTIONAL APPROACH

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Abstract

Effective written communication skills are an important part of educators' success, yet many preservice and in-service teachers struggle with writing. By integrating writing instruction into teacher preparation programs, teacher educators can help to improve teachers' writing confidence and competence. We have developed a five-component instructional approach based on the literature about writing as well as our own experiences with teaching graduate students academic writing. The approach integrates strategies that focus on attending to learners' needs, developing writing knowledge, using authentic formative and summative assessment, building a community of writers, and applying metacognition to the writing process. In this article, we present our instructional framework, highlight applications for undergraduate and graduate teacher preparation programs, describe preliminary data on the effectiveness of the approach, and discuss the benefits and challenges we have experienced in using the framework.

Keywords: Formative assessment, metacognition, teacher preparation, writing instruction

Effective written communication skills are essential for all educators. However, many students in teacher preparation programs struggle with achieving a high level of writing competence (Plakhotnik & Rocco, 2016). These struggles mirror faculty members' broader perceptions about the apparent decline in student writing in university settings (Carter & Harper, 2013). However, the impact of such decline might be particularly acute for education students. If students' writing challenges are not addressed early in their university career, these students will often continue to practice poor writing habits throughout their curriculum. Teacher candidates who have not had the benefit of strong writing instruction may even transfer poor writing habits into their work as teachers, thereby potentially affecting their own students. Furthermore, writing difficulties can impact teachers' communication outside of the classroom with parents, colleagues, and the entire school community. Poor written communication can negatively affect the community's perception of a teacher's abilities.

Similarly, at the graduate level, many teachers enter a master's program with writing challenges, including lack of confidence as writers and previous negative educational experiences with writing (Street & Stang, 2008). Although the relationship between teachers' own writing abilities and their effectiveness as writing teachers is

complex (Brooks, 2007; Cremin & Oliver, 2017), the professional and empirical consensus is that improving teachers' confidence and skill in writing is beneficial. Teachers who model effective communication and who value the writing process will be better prepared to help students find their own voices.

As is true of many students in Master of Education (M.Ed.) programs, students in our program write frequently across the curriculum, regardless of the specific program's focus (e.g., School Counseling, Educational Leadership, Educational Diagnostician). However, M.Ed. students in our school have expressed concerns about their own writing, ranging from difficulties with foundational skills to challenges with various modes of writing. These concerns have been echoed by the M.Ed. program faculty. Such findings prompted us to discuss whether we could improve teachers' writing confidence and competence by implementing a scholarly writing course guided by evidence-based practices in writing instruction. Although we developed our instructional approach within a stand-alone course that all M.Ed. students take, we propose that the framework is flexible enough to be integrated into existing undergraduate teacher preparation coursework and curricula as well.

The instructional approach we have developed was inspired by an evidence-based learning framework that integrates five components: learner, knowledge, assessment, community, and metacognition. The first four components are drawn from the empirical learning research described in the National Research Council's (2000) report, *How People Learn*. These components, as well as the fifth (metacognition), are further informed by the Framework for Success in Postsecondary Writing (CWPA, NCTE, & NWP, 2011).

Literature Review

How People Learn (National Research Council, 2000) is a ground-breaking work of scholarship on the science of learning. The authors identified four characteristics of effective learning environments. The first characteristic, which they call "learner-centered" (p. 133), refers to the attention instructors give to learners' backgrounds, experiences, beliefs, and needs. The learner-centered environment also respects and values learners' cultural uniqueness and helps learners apply their previous knowledge to the learning situation. The next characteristic, "knowledge-centered" (p. 136), refers to explicit teaching of both content and process, with multiple opportunities for learners to practice and apply what they are learning. This characteristic also helps learners make sense of what they are learning and provides them with the "big picture" of how different course topics are connected to each other and to the broader curriculum. The third characteristic, "assessment-centered" (p. 139), highlights the importance of aligning assessments with learning outcomes and instructional strategies. The authors also emphasize that assessment "should provide opportunities for feedback and revision" (pp. 139-140). Finally, the fourth characteristic, "community-centered" (p. 144) refers to the idea that learning often occurs in more than one social context, such as the classroom, the family, and the community as a whole. Building a sense of community among learners and fostering connections between learners and the larger community are key components of creating effective learning environments.

Although the literature discussed in *How People Learn* is largely focused on children's learning, the authors emphasized that the findings have implications for adult learning as well. Furthermore, the framework provided by *How People Learn* suggests that the four components are not isolated but rather, must be integrated to support learning. Subsequent texts (e.g., Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010) have applied similar learning principles to higher education; however, none of these works focuses specifically on learning to write. Thus, our application of the framework to writing instruction is novel. In addition, although the importance of metacognition (i.e., thinking about one's thinking) is discussed throughout *How People Learn*, metacognition is not highlighted as a component of the book's learning framework. Our instructional approach includes metacognition as a fifth component because we have found that metacognition is one of the most important elements of improving teachers' writing skills as well as their writing confidence.

Extensive work has examined the role of metacognition in learning. Some researchers (e.g., Hacker, Keener, & Kircher, 2009) have suggested that writing can be conceptualized as applied metacognition. Metacognitive awareness with regard to a writing task has also been examined (Negretti, 2012). Negretti explored beginning academic writers' metacognitive awareness of their own writing strategies and how this group uses their own awareness to regulate their writing process. Negretti found that metacognitive awareness contributed to self-regulation. In other words, students who are skilled at thinking about their own writing process, including their rationale for various writing choices, are better able to monitor and evaluate their writing. This finding implies that fostering metacognitive awareness throughout the writing process may help students work through the writing process more effectively and with greater attunement to the areas that typically challenge them as writers.

Entire volumes have been written about approaches to writing instruction in higher education (e.g., Beaufort, 2007; Coffin et al., 2002; Nesi & Gardner, 2012). However, much of this work has focused on either instruction within college composition courses (e.g., Conference on College Composition and Communication, 2015) or general principles for writing across the curriculum (e.g., Writing Across the Curriculum Clearinghouse, 2014). While these works are immensely helpful as a starting point, teacher educators may benefit from scholarship that specifically examines writing within teacher education programs. The literature on writing within teacher education is somewhat sparse. In a rare study of writing instruction and in-service teachers enrolled in a graduate education program, Street and Stang (2008) developed a course for secondary teachers to improve their own writing, to recognize the importance of written communication skills within their students, and to improve their ability to teach writing. The authors used the National Writing Project's professional development framework to guide their instructional approach. This framework heavily emphasizes the teacher as author and includes peer feedback. Street and Stang (2008) found that the majority of participants (i.e., graduate students who took the post-course survey) changed their perceptions of teaching writing, felt that the course improved their confidence, and observed improvements in their students' writing. However, the survey sample size was very small ($N = 14$), and it was unclear how the authors' instructional approach could be modified to suit other institutions' unique educational curricula.

Plaknotnik and Rocco (2016) adopted a different approach to improve education graduate students' writing skills. The authors developed writing support circles (WSCs) within a non-credit-bearing educational setting, and students were required to participate. Although the authors reported administering two measures (writing self-efficacy and WSC evaluation), no results were presented. Rather, the authors focused on challenges of the WSC approach, particularly students' frustration with the lack of academic credit, students' concerns about the WSC facilitator and assignments, and students' confusion about the purpose of the WSCs. These findings highlight the importance of having a clear framework that guides the instructional approach and that is made explicit to students throughout the learning process.

In another study examining writing instruction at the graduate level, Sallee, Hallett, and Tierney (2011) integrated writing into the curriculum of a graduate research methods course. The authors' goals included making writing more manageable for students, fostering collaboration and encouragement among students, focusing on all aspects of the writing process (e.g., grammar and mechanics, structure, and citations), and modeling the writing process for students. The authors used established writing instruction strategies, such as peer review and provision of extensive feedback. Although they did not present any data on the effectiveness of their approach, Sallee et al. concluded that graduate faculty members have a responsibility to help students with their writing. These authors' approach demonstrates how effective writing instruction can be woven into an existing graduate course without diluting the other content of the course.

Finally, at the preservice teacher level, Myers and colleagues (2016) conducted a national survey of 63 teacher educators to examine the extent of writing instruction in teacher preparation programs. The study's focus was on courses that teach preservice teachers how to teach writing. Myers et al. (2016) found that the majority of teacher preparation programs embed writing instruction in courses on reading instruction, with only a small

percentage (28%) offering a stand-alone writing instruction course. The absence of a stand-alone writing instruction course may be problematic, as some research suggests that writing instruction courses have unique benefits for preservice teachers. For example, Martin and Dismuke's (2015) study of teacher candidates enrolled in a writing methods course found that candidates reported a greater understanding of the writing process, writing instruction, and their own identities as writers. Explicit instruction is beneficial for developing these writing-related characteristics.

Our Evidence-Based Approach to Writing Instruction

Guided by the five components described above (learner, knowledge, assessment, community, and metacognition), we sought to address the gaps in the literature by developing a practical, evidence-based approach to teaching writing within teacher education programs. As we developed our approach, we carefully considered the writing needs of both teachers (i.e., our M.Ed. students) and their students. We hoped that by helping to build teachers' confidence and competence in writing, we would also help them apply their writing skills to their own practice as educators. Although we did not integrate explicit instruction on how to teach writing, we did set up the learning environment to model exemplary writing instructional practices that the teachers could use in their own classroom. In addition, our commitment to evidence-based practice ensured that we not only drew upon strategies that the scholarly literature had indicated were effective but also gathered evidence from our own students and from our observations. We began applying our approach in the graduate courses we taught in 2016. In 2018, we began systematically gathering quantitative and qualitative data to examine the effectiveness of the approach. Preliminary evidence from a sample of three online or hybrid course sections (35 students) is discussed following the description of the instructional approach. Note that when we refer to "the instructor," we are referring to ourselves in the context of our individual courses.

Learner-Centered Strategies

To ensure that learners' needs would guide instruction and feedback, we incorporated several strategies. First, analysis of learning needs was accomplished with initial self-assessments, early ungraded writing assignments, and open-ended reflection questions about what students' goals were for the course. Second, each student had a personal learning plan (PLP) that was based on his or her self-identified learning needs and the instructor's feedback about areas for growth. Because the instructor and student added to the PLP after each assignment, this document became a tool for reflecting on and highlighting areas of growth as well as areas of additional need for improvement throughout the course. Third, students were directed to within-course resources that targeted areas needing additional scaffolding (e.g., grammar resources and quizzes; didactic materials on modes of writing) and/or that provided guidance for strong writers who required more advanced instruction. Fourth, students' cultural and linguistic diversity was considered. The overarching course goal was to build students' competence and confidence as writers. Because we have a highly diverse student population, we wanted to ensure that students who self-identified as English language learners or who initially expressed low confidence in their written academic English skills would have a positive and effective experience in the course, regardless of their baseline level of written English proficiency. Finally, student choice was an important element of the course, as students were free to choose writing topics related to their professional interests and career goals, within the broad limits of the writing assignments.

Knowledge-Centered Strategies

The main knowledge-centered strategy employed in the course was the explicit teaching of a clear process for writing, including pre-writing, drafting, revising, responding, editing, and reflecting. Nielsen (2015) has noted that explicit writing strategy instruction has ample theoretical support in the literature, though the topic would benefit from additional research support with an adult learner population. In our course, students received instruction while going through the writing process twice within the course (once with a formative assignment and

once with a summative assignment), which provided them ample opportunity for engaging in writing tasks. We integrated well-established writing instructional practices (e.g., writing an outline, developing a concept map, engaging in peer-review, finding good source material; Troia, 2014) into the content of the course. As noted below, many students reported applying their learning to their own teaching of writing in K-12 settings. This application resulting from knowledge-centered strategies highlights the integrated nature of the framework, as metacognition is required to apply learning in one setting (e.g., engaging in the writing process in a graduate course) to a completely different setting (e.g., teaching elementary or secondary students how to write).

Assessment-Centered Strategies

The course used an innovative assessment strategy that emphasized formative feedback and progress while still providing a summative evaluation of students' writing proficiency. In line with the literature on the value of formative assessment in instruction (e.g., National Council of Teachers of English, 2013; Shute, 2008), the first half of the course was completely formative. We provided detailed comments on students' work on one complete assignment (from pre-writing through reflection). We also provided in-depth feedback on each student's personal learning plan (PLP). The PLP contained the course standards of writing proficiency that were the common goals for all students. The PLP also contained student-specific goals for the second half of the course. During the second half of the course, students completed another written assignment (pre-writing through reflection), and we again provided detailed comments. However, the final product was also evaluated with summative criteria for writing proficiency. Students' effort and improvement were taken into account by tracking their progress on the PLP from the first half through the second half of the course.

In addition, we ensured that the assignments provided authentic assessment of writing. Each student chose a research topic with personal relevance and social justice implications. This research topic became the student's focus for all writing tasks. Through this method, students developed additional expertise in an area of interest while also thinking about key social justice issues related to their practice. Students developed a teaching statement as part of one assignment, which prompted them to think about and express how their own values and beliefs shape their practice. Such assignments help to give voice to teachers' inner lives. Furthermore, such self-reflection helped teachers forge connections between the writing skills and values they were learning in our course and the application of such skills and values to their teaching practices.

One noteworthy difference between our course and many writing courses is that we did not use a strict rubric. Although rubrics are commonly used in evaluation of writing, some (e.g., Wilson, 2006) have convincingly questioned their necessity and benefit. After years of using rubrics to grade students' writing, we have found that the PLP strategy provided a more useful, nuanced, and accurate assessment of students' writing strengths and areas for growth. Furthermore, because students contributed to the PLP, the assessment process became a two-way dialogue rather than a one-way evaluation process.

Community-Centered Strategies

Building a learning community was one of the biggest challenges of developing the approach, as our students were enrolled in online or hybrid courses. However, we successfully built community through the use of writing support groups that regularly met (in person or online) to discuss their writing. Part of the writing support groups' function was to promote students' engagement in and comfort with the peer review process. We used Nellen's (n.d.) model of "I heard...; I noticed...; I wondered" to reduce the likelihood that students would simply edit each other's papers. Peer review is a well-established and highly effective instructional practice in higher education (e.g., Topping, 1998, 2005). Peer review appears to benefit not only the student receiving feedback but also the student providing feedback (Nicol, Thomson, & Breslin, 2014). Although students were often initially hesitant about sharing their work, we laid the groundwork for a comfortable peer review atmosphere by providing

encouragement, setting a positive tone by modeling constructive feedback on students' written work, and giving students guidance on what to focus on with peer review worksheets.

The instructor is also a crucial part of the community. Even in the online courses, we established a strong presence by participating in formal and informal online meetings via software built into our learning management system, sending frequent announcements to the class, responding quickly to email, and sharing personal reactions to students' writing. In addition, we provided ready access to one-on-one teleconferencing, as needed, in lieu of face-to-face office meetings.

Metacognition-Centered Strategies

In our approach, we fostered metacognition by requiring self-reflection at numerous points in the writing process. Students engaged in self-assessment of writing strengths, reflected on their experience within the writing support groups, and contemplated their individual growth and future writing goals. By embedding this self-reflection into the personal learning plan (PLP), we also fostered metacognitive dialogue between the student and the instructor. In this way, we had opportunities to respond directly to students' self-reflection, ask follow-up questions, and then self-reflect on our own instructional practice as it related to students' progress. Furthermore, peer review fostered metacognition, as it required students to critically reflect on their own writing vis-à-vis their review of peers' writing. The authentic assessment strategies described above also required metacognition, as such assignments as the teaching statement required self-reflection on beliefs, values, and practices.

Findings

Two sources of evidence were available. First, the PLP included a five-item Likert scale self-assessment, administered both pre (first course session) and post (final course session). This self-assessment required students to self-assess their skill in using library databases for research, analyzing research articles, applying APA style, scholarly writing, and applying the writing process to a variety of writing tasks. In the current study, we used paired *t* tests and effect sizes (Cohen's *d*) to measure significance and size of mean changes from pre to post on the five items. The PLP also included two qualitative end-of-course items in which students were asked to describe one or two things they found helpful about the course and one or two suggestions for improving the course. We categorized responses into various themes.

Second, we analyzed course evaluation data obtained with the IDEA Student Ratings of Instruction (SRI), which provided quantitative information on student learning outcomes. The SRI (e.g., Li, Benton, Brown, Sullivan, & Ryalls, 2016) is a widely used and well-established measure of student learning and carries the advantage of measuring students' self-rated progress on specific objectives that the instructor has identified as essential for the course. In the current course, we identified four learning objectives: learning to apply course material; developing skill in oral or written expression; learning how to find, evaluate, and use resources to explore a topic in depth; and learning how to analyze and critically evaluate ideas, arguments, and points of view. For the current study, we calculated the percentage of students who reported "substantial" or "exceptional" progress (ratings of 4 or 5 on a 5-point scale) for each objective.

Participants were 35 graduate students enrolled in the course in the Spring of 2018. Not all students completed all measures; thus, the specific number of participants for whom data were available will be indicated with each set of analyses. Means for self-assessment items are presented in Table 1.

Table 1
Means and Standard Deviations for Pretest and Posttest Self-assessment Items (N = 35)

Skill	Pretest <i>M</i>	Pretest <i>SD</i>	Posttest <i>M</i>	Posttest <i>SD</i>
Library databases	2.89	0.93	4.23	0.65
Analyzing articles	3.14	0.94	4.03	0.62
APA	2.57	0.88	3.57	0.78
Scholarly writing	2.40	0.95	3.74	0.78
Variety of writing	3.00	1.03	4.14	0.65

Students' self-assessment of their skills changed significantly from pre to post on all five items: library skills, $t(34) = 7.16, p < .001, d = 1.67$; research article analysis, $t(34) = 5.28, p < .001, d = 1.12$; APA skills, $t(34) = 4.88, p < .001, d = 1.20$; scholarly writing skills, $t(34) = 7.34, p < .001, d = 1.54$; and writing variety, $t(34) = 6.06, p < .001, d = 1.32$. All changes were significant and large (more than one standard deviation unit of change from pre to post). Although self-assessment data can be limited in validity, some evidence supported the accuracy of students' self-assessments, particularly with regard to their posttest writing skills, which were significantly correlated with their final grades: $r(33) = .42, p = .01$.

Table 2 presents the themes and response frequencies for helpful course aspects and areas for improvement; many students' responses noted more than one theme.

Table 2
Themes and Frequencies for Helpful Course Aspects and Suggestions for Improvement (N = 35)

Helpful Aspects	Frequency (%)	Suggestions	Frequency (%)
Instructor feedback	17 (49%)	More examples	7 (20%)
Resources/content	11 (40%)	Other (e.g., more collaboration)	5 (14%)
Clear expectations	7 (20%)	Technical difficulties	3 (9%)
Group/peer feedback	7 (20%)	More time needed	3 (9%)
Navigation/organization	7 (20%)	Group difficulties	2 (6%)
Other (e.g., PLP)	7 (20%)		
Pacing/timing	4 (11%)		

The aspects of the course most commonly cited as helpful included the group/peer collaboration, course content/resources, clear expectations, instructor feedback, and course navigation/organization. These strengths clearly map onto the community, knowledge, assessment, and learner components of our approach. The most common areas for improvement included technical difficulties and students' desire for more examples, more collaboration, and more time.

Finally, course evaluation data indicated that students who completed the measure ($N = 27$) almost unanimously reported either substantial or exceptional progress on the four learning objectives: learning to apply course material (93%); developing skill in oral or written expression (93%); learning how to find, evaluate and use resources to explore a topic in depth (96%); and learning to how to analyze and critically evaluate ideas, arguments,

and points of view (93%). In summary, quantitative data across both sources indicated that students improved substantially, while qualitative data indicated that the aspects of the course that were most valued supported the components of our instructional approach.

Benefits and Challenges

Our highly diverse graduate student population includes a large number of first-generation graduate students, bilingual and/or immigrant students from non-English speaking countries, and mid- to late-career students. Many entered teaching through alternative certification routes. Many teach in Title I K-12 schools. In addition, a growing number of our students serve in emerging online classrooms that reach at-home and in-class learners through multi-grade classrooms with limited direct teacher access. Given this background, improving teachers' writing has significant potential for direct spillover effects to a diverse range of high-need, underserved K-12 learners. Such impact extends beyond the individual teacher's classroom because many of the teachers quickly transition into academic leadership positions in their K-12 campuses, thereby further extending their range of student learning influence and impact capacity.

Some of the direct benefits of improving teachers' writing included the following:

- 1) Extending teachers' capacity in scholarly writing and their related enhanced capacity in formal communication skills;
- 2) Enhancing teachers' comprehension and consumption of scholarly literature, which further increases teachers' ability to stay current with emerging learner improvement trends, strategies, and other professional development;
- 3) Empowering teachers as reflective scholar-practitioners;
- 4) Improving K-12 students' writing through improved teacher writing skills;
- 5) Improving schools' success, which in turn transforms viable and vibrant local communities.

Students' comments during online writing support group meetings and their anonymous qualitative feedback on course evaluations indicated that many students extended the writing instruction practices to their own K-12 classrooms. Furthermore, students generally reported feeling increased confidence and competence that matched our own assessment of their improvement. Perhaps most importantly, students reported feeling respected and validated by their peers and instructor. Students appreciated detailed, timely, and constructive feedback on their writing, which they often reported being somewhat surprised by (perhaps due to lack of detailed or helpful feedback in previous educational settings). For example, in correspondence at the end of the semester, one student stated, "I have always struggled with writing and haven't always had someone who wrote kind words." This comment captured the spirit of what we wanted our writing instruction to be—a different and even corrective experience for teachers who may have received negative feedback on their writing in the past.

Given the aforementioned background that the majority of our teachers have, several challenges encountered in improving their writing are worth noting:

- 1) Many teachers lack mastery of prior/entry-level academic and scholarly writing skills.
- 2) Notable numbers are mid/late-career teachers who have been out of academic/scholarly learning and writing environments for significant periods. This delay not only impacted their journey to scholarly writing mastery but also impeded their mastery of newer/updated scholarly attitudes and standards. Their learning curve of prerequisite background skills and knowledge is steep and further stretched by the short duration of the graduate program.
- 3) Almost all teachers have full-time employment, with direct responsibility for many students, lesson management, and other school duties. In addition, the majority of teachers have family responsibilities. This requires juggling of time and schedules to maintain full-time graduate learning and the demands of mastering scholarly writing.

These challenges are not insurmountable, however. Awareness of one's learners and their needs is part of the learning-centered component of writing instruction. We continue to tweak the course to be manageable and practical for our learners while also maintaining rigorous educational standards.

Implications for Practice and Research

Although our sample size is small, our findings are robust: The instructional approach developed for this graduate-level course in research and scholarly writing has been effective with our students. However, the typical teacher education program curriculum leaves little room for additional coursework (Sallee et al., 2011); thus, it is difficult to implement a transitional writing course for students with low writing self-efficacy and/or underdeveloped writing skills in the undergraduate context. However, writing instruction informed by our approach can be integrated into existing courses and curricula. We offer several recommendations for teacher educators and teacher education programs.

We recommend the inclusion of the writing practices and instructional strategies we have described here to target students at all levels of higher education. This recommendation was supported by students' comments that they experienced a lack of writing instruction and engagement in their prior undergraduate, professional, and post-graduate experiences. For programs that cannot offer a stand-alone writing course, many alternatives are available. Writing boot-camps (during the first or second week of a semester) or mini-courses (during an academic break) can introduce concepts that can be reinforced within later content courses. Supplementary instruction is another option that involves pairing writing instruction with a content course (e.g., in the form of a 1-credit lab); the key in this model is that writing instruction is grounded in the context of the course content, which makes the writing instruction more practical and meaningful. Existing content courses can also be designated as writing-intensive, with time carved out of regular instruction to address writing strategies and practices. This approach can be particularly effective if the course is team-taught (Sallee et al., 2011). Regardless of the format and context of delivery, any approach to writing instruction will benefit from thoughtful, integrated inclusion of strategies that reflect the five components of our approach (learner, knowledge, assessment, community, and metacognition).

One question not addressed in the current work is whether there are important cultural factors that contribute to students' experiences with the approach we have described. Although the learner-centered strategies do appreciate and respect students' cultural, national, and linguistic differences, we did not look at the impact of these differences on students' outcomes. Additional research is needed to determine whether our experiences with students replicate across settings (including international settings) that have varying demographic, cultural, socio-political, and communal attributes and attitudes, as well as diverse approaches to public education. For example, although we have a moderate-sized international student population in our M.Ed. program, we have not yet attempted to explore how writing instruction differentially affects international students. This area is ripe for investigation.

Future Directions

We hope to undertake a comprehensive curriculum review that examines writing instruction across our curriculum. We have started this process by integrating and coordinating writing instruction across the two core courses that our M.Ed. students take: the course described here (Educational Research and Scholarly Writing, usually taken in the first or second semester) and the capstone course (Educational Research Design and Data Analysis, which typically is taken the last or penultimate semester). We have used the same framework to guide instruction in both courses, attempted to identify common writing outcomes, integrated formative feedback consistently across the two courses, and capitalized on the benefits of peer review in both courses. This process is a model of writing instruction and assessment across the curriculum, and we hope to extend the process to more graduate education courses within our M.Ed. program in the future. We urge teacher educators to value writing instruction and to apply evidence-based strategies using the five-component framework in their undergraduate and

graduate education courses. Not only will teachers benefit from this comprehensive approach, but improvement in their students' writing may even depend on it.

References

- Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works*. San Francisco, CA: Jossey-Bass.
- Beaufort, A. (2007). *College writing and beyond: A new framework for university writing instruction*. Logan, UT: Utah State University Press.
- Brooks, G. W. (2007). Teachers as readers and writers and as teachers of reading and writing. *The Journal of Educational Research*, 100(3), 177-191.
- Carter, M. J., & Harper, H. (2013). Student writing: Strategies to reverse ongoing decline. *Academic Questions*, 26, 285-295.
- Coffin, C., Curry, M. J., Goodman, S., Hewings, A., Lillis, T. M., & Swann, J. (2002). *Teaching academic writing: A toolkit for higher education*. New York, NY: Routledge.
- Conference on College Composition and Communication. (2015). *CCCC statement on preparing teachers of college writing*. Retrieved from <http://www2.ncte.org/statement/statementonprep/>
- Cremin, T., & Oliver, L. (2017). Teachers as writers: A systematic review. *Research Papers in Education*, 32(3), 269-295.
- Council of Writing Program Administrators, National Council of Teachers of English, & National Writing Project. (2011). *Framework for success in postsecondary writing*. Retrieved from www.wpacouncil.org.
- Hacker, D. J., Keener, M. C., & Kircher, J. C. (2009). Writing is applied metacognition. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Handbook of metacognition in education* (pp. 154-172). New York, NY: Routledge.
- Li, D., Benton, S. L., Brown, R., Sullivan, P., & Ryalls, K. R. (2016). *IDEA technical report No. 19: Analysis of IDEA Student Ratings of Instruction System 2015 pilot data*. Manhattan, KS: The IDEA Center. Retrieved from https://www.ideaedu.org/Portals/0/Uploads/Documents/Technical-Reports/IDEA_Technical_Report_No_19.pdf
- Martin, S. D., & Dismuke, S. (2015). Teacher candidates' perceptions of their learning and engagement in a writing methods course. *Teaching and Teacher Education*, 46, 104-114.
- Myers, J., Smetana, L., Scales, R. Q., Yoder, K. K., Grisham, D. L., Ikpeze, C., ... & Martin, S. (2016). What about writing? A national exploratory study of writing instruction in teacher preparation programs. *Literacy Research and Instruction*, 55(4), 309-330.
- National Council of Teachers of English. (2013). *Formative assessment that truly informs instruction*. NCTE Position Statement. Retrieved from http://www.ncte.org/library/NCTEFiles/Resources/Positions/formative-assessment_single.pdf
- National Research Council. (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: The National Academies Press.
- Negretti, R. (2012). Metacognition in student academic writing: A longitudinal study of metacognitive awareness and its relation to task perception, self-regulation, and evaluation of performance. *Written Communication*, 29(2), 142-179.
- Nellen, T. (n.d.). I heard, I noticed, I wondered. [Website.] Retrieved from <http://www.tnellen.com/cybereng/method.html>
- Nesi, H., & Gardner, S. (2012). *Genres across the disciplines: Student writing in higher education*. Cambridge, UK: Cambridge University Press.
- Nicol, D., Thomson, A., & Breslin, C. (2014). Rethinking feedback practices in higher education: A peer review perspective. *Assessment & Evaluation in Higher Education*, 39(1), 102-122.
- Nielsen, K. (2015). Teaching writing in adult literacy. *Adult Learning*, 26(4), 143-150
- Plakhotnik, M. S., & Rocco, T. S. (2016). Increasing writing self-efficacy of adult learners: Different approaches, different results. *Adult Learning*, 27(4), 160-167.
- Sallee, M., Hallett, R., & Tierney, W. (2011). Teaching writing in graduate school. *College Teaching*, 59, 66-72.
- Shute, V. J. (2008). Focus on formative feedback. *Review of Educational Research*, 78(1), 153-189.
- Street, C., & Stang, K. (2008). Improving the teaching of writing across the curriculum: A model for teaching in-service secondary teachers to write. *Action in Teacher Education*, 30(1), 37-49.

- Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, 68(3), 249-276.
- Topping, K. J. (2005). Trends in peer learning. *Educational Psychology*, 25(6), 631-645.
- Troia, G. (2014). *Evidence-based practices for writing instruction (Document No. IC-5)*. University of Florida, Collaboration for Effective Educator Development, Accountability, and Reform Center. Retrieved from http://cedar.education.ufl.edu/wp-content/uploads/2014/09/IC-5_FINAL_08-31-14.pdf
- Writing Across the Curriculum Clearinghouse. (2014). *Statement of WAC principles and practices*. Retrieved from <https://wac.colostate.edu/principles/>
- Wilson, M. (2006). *Rethinking rubrics*. Portsmouth, NH: Heineman.

TEACHER PERCEPTIONS OF KNOWLEDGE REQUIRED FOR TEACHING ENGLISH LANGUAGE LEARNERS: A STUDY OF TEACHER PREPAREDNESS

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Abstract

Accountability for the improvement of educational outcomes for all students has helped close the gap between English Learners (ELLs) and English proficient students. One way classroom teachers address the needs of ELLs is through national and state established standards. In last year's Forum, we shared an analysis of state and national standards for teachers of ELLs. In this article, we used Texas standards in a survey designed to examine teacher perceptions of their preparedness to teach ELLs. Fifty-four teachers within Texas have participated in a mixed-methods survey regarding their preparedness with specific skills needed for working with ELLs. Findings from this study may help teacher educators determine ways to prepare teachers that extend beyond standards required for teacher certification.

Keywords: English language learners, teacher preparation, English Language Proficiency Standards (ELPS)

Students face many challenges in today's educational world. One of the major contributors to this academic struggle is a lack of unified language, not only among peers but between the teachers and students. English Language Learners (ELLs) are students whose first language is not English. They are placed in programs to supplement their education through both language and content supports. There are a variety of English as a Second Language (ESL) programs. Some programs pull ELLs out of their regular classes for a period of time while they focus on linguistic development. Others have specialists work with students on their content materials during class times. Schools with a great need for ESL instruction often follow a bilingual or dual language structure in order to teach students language and content. The formatting of the program varies by campus, district, and specific student needs.

When students reach a certain level of English language proficiency, they are exited from their ESL program. Although they have exited, these students usually still require some assistance with less common grammatical structures or vocabulary. Both the second language and content material are addressed in ESL programs. If teachers are not adequately prepared to teach this specialized population, students will not be successful academically or socially due to a lack of communication skills. Teachers must be aware of the differing proficiency levels present within one classroom. Each ELL is a different individual with specific needs. The purpose of this research is to analyze teacher perceptions of their preparedness to teach ELLs.

The Need for ESL Programs

From 1995 to 2005, “the ELL population doubled in 23 states” (National Education Association, n.d., p. 1). Within the last decade “this population has increased by approximately 57 percent” (McGraner & Saenz, 2009, p. 1). The increase in this population places more ELLs in a general education classroom instructed by a teacher who may not be prepared to address the specific needs of a second language learner. These percentages do not include the population of students who have exited the ESL programs after meeting a sufficient proficiency or students who did not meet the requirements to be placed into an ESL program. Although they have exited the program, these students still struggle with academic and content vocabulary.

According to federal law, “ELLs must be provided appropriate English language development support services” (Samson & Collins, 2012, p. 4) in order to aid them with content and progress them through learning the English language proficiently. The Texas Education Code requires that ESL programs are available “to provide each ELL the opportunity to be enrolled in the required program at his or her grade level” (“Texas Education Code”, n.d., §89.1210 a). These students require supports in speaking, reading, writing, and hearing the English language, not only to socialize and interact with the adults and peers around them, but also to function within the academic courses in which they are enrolled. The strong correlation between language development and academic success implies that “all classroom teachers with ELLs must understand the principles and best practices of supporting their unique needs” (Samson & Collins, 2012, p. 4). When teachers are not effectively prepared to aid their students in their language learning, the students suffer from a lack of help linguistically and a lack of communication regarding academic content.

ELLs are supposed to “meet the same challenging State academic content... and achievement standards” as English-speaking students (McGraner & Saenz, 2009, p. 1). To perform at high levels of achievement, students must understand the academic content material being taught. Understanding the content material requires understanding the language in which instruction is provided. State and local educational agencies and schools are accountable for students increasing in English proficiency as well as increasing in core content knowledge (McGraner & Saenz, 2009, p. 2). Therefore, teacher training related to instruction for ELLs should be a focus.

Standards for ELL Instruction

The standards used for ELL instruction vary by state, yet ultimately, they have the same goal: to advance the student’s proficiency of the English language and success with core academic content. While specific states may have unified standards for teachers to implement as they teach these students, the standards might not be enforced, required, or properly taught. In the state of Texas, there is no required level of training or expertise to have ELLs in a general education classroom. To be considered as an ESL instructional specialist, a teacher in Texas must be state certified in ESL instruction. For Texas teachers not seeking ESL endorsement, the only opportunities to learn about “educating diverse student populations” (Education Commission of the States, 2014) is during professional development trainings. This requirement refers to various types of diversity, not just linguistic diversity. Such a broad requirement for certification may make the preparation of teachers somewhat difficult. Undergraduate preservice education programs often offer courses in understanding ESL instructional strategies and techniques, yet such courses are not always required, and some may be taught by instructors lacking knowledge in beneficial approaches, materials, or developmentally appropriate concept development of ELLs to effectively prepare novice teachers.

Within the state of Texas, the ESL certification test is taken through the Texas Examinations of Educator Standards (TExES) program as part of the Texas Education Agency (TEA). The three domains of this exam emphasize language concepts and acquisition, ESL instruction and assessment, and foundations of ESL education, cultural awareness, and family and community involvement. The largest portion of the exam focuses on ESL instruction and assessment, including “pedagogical skills required for teachers to effectively teach students” (Vasquez & Pilgrim, 2017, p. 41), differentiated instruction, and appropriate assessments.

The seven standards for the TExES ESL certification exam include the teacher's understanding of the structure and conventions of the English language, the foundations of ESL education, the processes of first- and second-language acquisition, the methods for implementing effective, developmentally appropriate ESL instruction, factors that affect ESL students' learning, the use of assessments and adapting instruction, and how to serve as an advocate for ESL students. The first standard, structure and conventions of the English language, includes grammar, syntax, and morphology, all necessary for ELLs to understand as they learn to read and write English. Foundations of ESL education refers to education law as well as the basic background knowledge of ESL programs, how they work, why ESL programs are needed, and which populations they serve. The processes of language acquisition emphasize how both the first and second languages are learned and how the two are related. Methods for implementing effective, developmentally appropriate instruction regards the process of differentiation for ESL students. Teachers are advised to know the environmental, developmental, and physical factors that hinder or contribute to a students' learning, specifically those that affect students learning another language. Understanding assessments includes how students are assessed, modifications for diverse student populations, and how results are used to adapt and modify instruction. The role of the ESL teacher is explained through the seventh standard which emphasizes how teachers advocate for their students' education, specialized programs, and progress.

A majority of the other states utilize the PRAXIS English to Speakers of Other Languages (ESOL) exam to certify their teachers through the Educational Testing Services (ETS). The PRAXIS divides the test in four content categories: foundations of linguistics and language learning, planning, implementing and managing instruction, assessment, and cultural and professional aspects of the job. The largest category in this exam is the foundations of linguistics and language learning, which emphasizes the framework of a language and understanding it.

Both of these major certification exams include understanding the structure and basic components of language in general, as well as the language acquisition process. With a thorough understanding of what constitutes a language and how people learn it, teachers can use developmentally appropriate strategies to help students acquire the language in both a social and academic setting. Such understanding also emphasizes how the first language can affect the second language that is being learned. Vivian Cook (2016), a professor of applied linguistics at Newcastle University, has analyzed a study regarding second language acquisition of grammatical morphemes and found universal truths. "All L2 (second language) learners have much the same order" (p. 35) of acquiring the grammatical morphemes, regardless of their educational background, age, or first language. This information is important to understand, so that teachers are aware of the order of which they must teach. Despite the ELL's grade level, if they are unable to master the lowest grammatical morpheme, they will be unsuccessful at demonstrating more challenging ones. This grammatical application can be reflected upon all contents. The building blocks of a language must be present before students are able to use the language correctly and effectively.

Teacher Preparation

The content being taught in preparation for how to teach "diverse student populations shows few changes over the last 25 years" (McGraner & Saenz, 2009, p. 2). With a "fast-growing population of ELL students" (p. 13), teachers should be kept up to date in modern and effective strategies and methods for teaching this specific group of students. "Qualified ESL teachers are in great demand in public schools in the United States" (TESOL International Association, 2018, para. 1). During the 2017 school year, 15.5% of Texas students participated in ESL programs (NCES, 2017). Since there is such high demand for ESL education, research, trainings, and coursework should adequately prepare teachers for this classroom experience. Unfortunately, mainstream teachers feel like they are unprepared to handle the specific needs of teaching ELLs within their classroom for a variety of different reasons (Durgunoglu & Hughes, 2010, p. 32).

One reason teachers feel unprepared to teach ELLs is lack of professional development on the subject at hand. According to the Education Commission of the States, "over 30 states do not require ELL training for general classroom teachers beyond the federal requirements" (2014). Federal law mandates that districts must provide professional development that is research-based to anyone within the schools who work with ELLs. Trainings should include effective methods for aiding ELLs' learning and must also have a positive and lasting impact on those working with the ELLs. Out of

the fifty states, 34 had no ELL training. Some states required that teachers have their ESL certification or endorsements, while others require some attendance to trainings. Additionally, teacher preparation programs are offering courses that allow preservice teachers to experience pedagogical strategies and ESL classroom environments. In Texas, teachers are required only to have the ESL certification if they are the ESL teacher in a content-based program or pull-out program with ELLs. The teachers in a content-based program provide supplements in all content areas while teachers in a pull-out program provide instruction exclusively in English language arts (“Texas Education Code”, n.d., §29.061 c). A generalist teacher is responsible for providing all other instruction in a mainstream classroom. Since generalist teachers are able to have ELLs in their classrooms, the state requires them to attend trainings during their license renewal period that specify in “instruction about education diverse student populations” (“Education Commission of the States”, 2014).

Another struggle within an ESL program is a lack of clear communication with the parents of ELLs. If teachers are unable to communicate with parents regarding classroom expectations, student goals, and academic progress, there is a gap between the family and the classroom. There could also be additional problems due to a lack of comprehension of the expectations. Some districts or schools are unable to find teachers or translators who are familiar with the “many linguistic backgrounds” (Durgunoglu & Hughes, 2010, p. 32) of the ELLs. This results in incoherent communication between the teacher and student, teacher and parents, and the school and parents.

A 2010 study by Durgunoglu and Hughes emphasized the preparedness of teachers to teach ELLs at a high school level, as well as their self-efficacy. This study took place at a Midwestern university in the United States. A survey was distributed to 62 preservice teachers who had completed their teaching education and diversity training, yet “did not feel well-prepared to address the needs of ELL students” (35). The result of their survey yielded that the preservice teachers felt neutrally about their preparedness to teach second language learners. “The confidence...about their teaching methodology and skills” was the primary contributor to the preservice teachers’ self-efficacy, which ultimately decreased during their student teaching experience (33). A lack of confidence to teach ELLs by the preservice teachers was met without assistance from their mentoring teachers, demonstrating a lack of preparedness from all.

Due to a lack of training and communication barriers, teachers feel unprepared to work with ELLs in an effective manner. There is limited research to demonstrate ways in which teachers feel prepared or unprepared to teach ELLs. Yet, preparation programs that effectively train teachers for their roles as teachers would increase teachers’ self-efficacy regarding ESL instruction. When teachers feel better prepared, they are “more confident and successful” at teaching their students (Shreve, 2005).

Methods

The purpose of this mixed-methods study was to investigate teacher perceptions of their preparedness to teach ELLs. Through the survey process, the research examines the Texas state standards for teacher preparation and whether or not they align with the skills that teachers feel they need to be successful teachers of English Language Learners. The project is significant because many teachers do not feel prepared to teach ELLs, and educators need information to improve teacher preparation in this area. This project will answer the research question “What are teacher perceptions of the preparation they received to be teachers of English Language Learners?”

Data Collection

An instrument was developed to evaluate teacher perceptions of their preparedness to teach ELLs (Appendix A). The eight-question instrument aligned with the standards of language, instruction, differentiation, assessment, and professional duties and how well teachers felt prepared within each standard. The survey instrument, designed using a Google Form, was emailed to teachers across Texas during the fall of 2017. Both quantitative and qualitative data were collected from teacher participants in order to determine if teachers feel prepared for classroom experiences with ELLs based on what they are required by the state of Texas to know for certification, as well as to determine ways for teachers to feel more prepared entering the classroom.

The participants of this survey are certified teachers within the state of Texas. The survey was anonymous, but the researcher can assume participants range in their age, years of teaching experience, certification specifications, and grade levels in which they have taught. Participants are of different genders, ethnicities, and educational backgrounds. Out of the 54 teachers who participated in the survey, 59.3% are certified to teach ESL. These participants who are ESL certified have successfully passed a certification exam for ESL either through the TExES or another certification exam.

Data Analysis

The focus of this study was to examine teacher perceptions of preparedness to teach ELLs. Quantitative data were analyzed by reporting frequencies of yes/no responses of teachers. Qualitative analysis focused on the content of open-ended teacher responses. Data were analyzed and categorized using a coding system, and themes were developed to reflect ways teachers felt both prepared and unprepared to teach ELLs. Data analysis initially occurred through a process of deductive coding using Texas state standards for teaching ELLs: an understanding between the first and second language, providing explicit instruction, differentiation of instruction, effective assessment, and an understanding of the ESL teacher's role. Other themes emerged during inductive analysis. The researcher identified four major themes and three subthemes that reflect ways teachers felt prepared or unprepared to teach ELLs.

Findings

Quantitative Data

The quantitative responses collected from the survey have been separated into two groups: teachers who are ESL certified and teachers who are not ESL certified (Table 1). The data shows that 53.1% of certified teachers did not feel they were prepared to understand the relationship between the first and second languages. Likewise, 72.7% of non-ESL certified teachers felt unprepared to understand the correspondence between the first and second languages. 53.1% of certified teachers reported they are unable to provide effective and explicit instruction to ELLs, and 72.7% of non-certified teachers do not feel prepared to provide effective, explicit instruction. While 59.4% of certified teachers do feel prepared to differentiate instruction between ELLs and English-speaking students, only 31.8% of non-certified teachers feel prepared. Although 68.2% of non-certified teachers feel that they are unable to assess ELLs effectively, 62.5% of certified teachers feel prepared to assess ELLs. Results show that 65.6% of certified teachers adequately understand their role as an ESL teacher, while only 27.3% of non-certified teachers understand their role.

Table 1
Frequency Data: Percentage of Teachers Who Felt Prepared

Standard	Certified	Non-Certified	Total
Understand relationship between L1 and L2	46.9 %	27.3%	38.9%
Effectively provide explicit instruction to ELLs	46.9%	27.3%	38.9%
Differentiate instruction between ELLs and English Speaking	59.4%	31.8%	48.1%
Effectively assess ELLs	62.5%	31.8%	50%
Understand role as ESL teacher	65.6%	27.3%	50%

Qualitative Data

Through the process of deductive and inductive coding, the Texas standards for teaching ELLs were collapsed into four major themes and three subthemes. Qualitative analysis resulted in four major themes and three subthemes. Themes derived from deductive coding included differentiation, assessment, the relationship of the first and second languages, and

experience. These themes are in alignment with the standards for teachers of ELLs. Further analysis utilizing inductive coding resulted in additional themes: empathy towards students' individual needs, understanding students' native culture, and the application of differentiation strategies.

Differentiation. Many teachers in this study did not feel prepared to provide differentiated instruction through the standards for teachers of ELLs. Teachers were aware that the students differ within their individual needs, such as their native language, educational experiences, proficiency levels, and personal learning preferences. Yet they were unable to provide differentiated instruction to meet each of these specific needs. The standards from the ESL certification exams alone provide examples of strategies and skills for differentiation, yet teachers felt unprepared to utilize them. Teachers claimed that "what really matters is being able to have practical strategies...that you know will be effective" in providing instruction. The surveyed teachers felt as if they had some skills and strategies that would work for their ELLs, but did not know how to apply them in order to match the specific students' needs. For example, one teacher noted that he felt as if he had mastered specific learning skills and strategies for ELLs to use, yet had "next to no training on how to work with them in a classroom setting." Often, ELLs will need multiple differentiations due to their varying proficiency levels in reading, writing, listening, and speaking.

The English Language Proficiency Standards (ELPS) were created to assess and develop ELLs' proficiencies of the English language. Students may have a different proficiency level for each of their abilities to read, write, listen, and speak. The four proficiency levels are beginner, intermediate, advanced, and advanced high. One teacher stated that "very little was offered in building units catered to each beginner, intermediate, and advanced levels of language." Since students can have different levels of proficiency for each of the four skills, a lot of differentiation is required in order to teach ELLs. A subtheme of this category was demonstrating empathy towards students' individual needs. A majority of the gathered responses emphasized understanding what each student needed to be successful, since all students "[are] individuals and different." This is a major aspect of differentiated instruction. When the teacher is aware of what the students need, he is more likely to be able to help them.

Assessment. Teachers knew how to modify assessments overall to be appropriate for ELLs, yet felt unable to do so specifically for students' individual needs. With varying levels of ELLs, teachers reported difficulty in creating assessments to match the students' differing levels of proficiency. They also felt unprepared to provide assessments to students who were unable to understand the instructions, questions, and answers. Teachers felt as if they did not know "how to accurately assess ELLs" in a developmentally appropriate manner. Assessments must be differentiated regarding a specific student's proficiency levels in reading, writing, listening, and speaking. Teachers struggled with "[finding] alternate activities that show content mastery." Therefore, students with a different native language may not effectively demonstrate their knowledge if they are unable to understand the assessment. Teachers would benefit from specialized trainings on how to create differentiated assessments.

Relationship of First and Second Languages. Teachers also reported a need to have some knowledge of the students' native languages to "help break the language barrier". Twelve teachers commented that having some knowledge of the ELLs' native language helped aid communication between the teacher and student. According to gathered responses, the surveyed teachers recognized the difficulty of developing the students' second language while maintaining their first. Students who are learning a second language should also be given a time to strengthen their skills within their first language. Teachers who were unfamiliar with language acquisition or the students' native language were unable to provide these opportunities or "relate the material in both languages" for their students. A subtheme provided by this category was knowledge and an understanding of the students' native culture. By knowing some of the language, they are able to have an insight into the students' culture and background. This information allows for better communication, trust, and relationships between the teachers and students. It also bridges the educational gaps, helps to "deal with the social issues" that arise, and enables students to learn better.

Experience. Six teachers, both certified and non-certified, mentioned either lacking preservice experience with ELLs or appreciating the benefits of preservice experience. They emphasized that "experience is the key" to learning the

strategies, skills, and methods used to teach ELLs. They requested more experiences available to current teachers during professional development trainings and to preservice teachers during their certification preparations. Within this theme of experience, a subtheme of application emerged. For example, one teacher stated that “application is where teachers really hone their skills” and develop a clear understanding of working with these students. Application allows for teachers to demonstrate their understanding of pedagogical skills for ELLs. The teachers mentioned having learning opportunities in a classroom with ELLs better prepared them for having ELLs within their own classroom.

Conclusions and Implications

Overall, both certified and non-certified ESL teachers felt unprepared to teach ELLs in many different aspects. According to Durgunoglu and Hughes’ 2010 study of teachers’ self-efficacy, a teacher’s confidence in their abilities “has a powerful connection to teaching and learning” (p. 32). One of the major concerns with this perception of a lack of preparedness is that all teachers are required to differentiate their instructions for diverse student populations. While this skill of differentiation is required through the Texas Education Code (n.d., §149.1001), of all teachers (not just certified ESL teachers), many feel unprepared to do this. Teachers are required to design developmentally appropriate lessons for students. All students are at different developmental levels, requiring specialized instruction for many students. If teachers feel unprepared to teach, students may not be offered the most beneficial strategies to support their needs.

In addressing this unpreparedness, it is necessary to consider ways in which the standards are presented within teacher preparation programs or in professional development. If teacher preparation programs thoroughly address the standards during instruction but never provide the opportunity to apply the standards in practice, teachers may not feel prepared to teach English Learners. In a 2016 study of teacher perceptions related to preparedness, teachers did not feel prepared by their teacher education programs for teaching ELL students. Participants in the study shared a lack of preparatory coursework on strategies for teaching ELLs, a lack of observational experiences in classrooms with ELL students, and a lack of experiences in working with ELLs during field placements and student teaching (Correll, 2016). Perhaps hands-on experiences where knowledge about ELLs could be applied would benefit teachers.

The state standards for teachers of ELLs may be an inadequate guide for preparation programs training teachers to work with students learning a second language. A stronger emphasis in preparing teachers to differentiate instruction would benefit all teachers. Teachers are required not only to differentiate instruction for their ELLs, but also for other diverse student populations. It is important to know how to differentiate in many different aspects, including assessments. The state standards alone do not ensure teacher preparedness to work with ELLs who require differentiated instruction and accommodations needed for content mastery. Without previous linguistic knowledge, teachers are unable to help students promote their native language. Trainings and certification preparation should allow for teachers to learn a basic understanding of how languages work, how a language is learned, and what they can do to promote the development of both languages. One major aspect of improvement for all teacher preparation programs would be to provide more experience and application for working with ELLs. Without a realistic understanding of the students’ needs, teachers will not be able to help their students. While the standards provide a framework for the knowledge needed to work with ELLs, the state is lacking in the proper preparation for this classroom experience.

To prepare teachers more effectively for their role either as an ESL teacher or working with ELLs, preparatory programs should offer more experience, application of skills, and understanding of languages. More experience in the field of study would allow for preservice teachers to gain a clear understanding of the ESL teacher’s responsibilities. The preservice teachers would have opportunities to apply their skills and see the strategies they have learned in action with the students. Languages could be heard, cultures could be shared, and language experiences could be observed so that the preservice teachers know how to promote the linguistic growth and relationship within their own classroom.

To further this research, the survey could be extended to more teachers within the state of Texas with an additional question regarding the grade level in which that they have taught ELLs. An examination of grade levels would offer useful information of realizing where the greatest lack of preparedness occurs: the elementary or secondary level. Understanding

the needs of each grade level when working with ELLs could allow for trainings to be specialized and focus on the elementary and secondary levels. This research could also be extended by surveying teachers of another state and comparing their perception of preparedness regarding standards for teachers of ELLs. General studies show that most teachers of ELLs in any state feel unprepared, due to a lack of mandated trainings, courses, or certifications.

Ultimately, this research demonstrates a potential problem of unpreparedness amongst Texas teachers towards effectively teaching ELLs. This unpreparedness may stem from a lack of official trainings or preservice courses. Experience and application of skills could be added to preparatory programs so that teachers gain insightful observations within ESL classrooms. Teachers of ELLs and general education could both benefit from better preparations for differentiating instruction and assessment for various diverse student populations. Knowledge and skills for working with ELLs is important for all teachers in Texas.

References

- Cook, V. (2016) *Second language learning and language teaching*. New York, NY: Routledge.
- Correll, P. K. (2016). *Teachers' preparation to teach English language learners (ELLs): An investigation of perceptions, preparation, and current practices*. Theses and Dissertations. University of Kentucky. Retrieved from https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1021&context=edc_etds
- Durgunoglu, A. Y. & Hughes, T. (2010). How prepared are the U.S. preservice teachers to teach English language learners? *International Journal of Teaching and Learning in Higher Education*, 22(1), 32-41.
- Education Commission of the States. (2014). *What ELL training, if any, is required of general classroom teachers?* Retrieved from <http://ecs.force.com/mbdata/mbquestNB2?rep=ELL1415>
- McGraner, K. & Saenz, L. (2009). Preparing teachers of English language learners. *National Comprehensive Center for Teacher Quality*, 1-23.
- National Center for Education Statistics (2017). *The condition of education, 2017*. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2017144>
- National Education Association. (n.d.) *Professional Development for General Education Teachers of English Language Learners*. An NEA Policy Brief.
- Samson, J. F. & Collins, B. A. (2012). Preparing all teachers to meet the needs of English language learners. *Center for American Progress*, 1-25.
- Shreve, J. (2005). *Educators are poorly prepared for ELL instruction*. Retrieved from <https://www.edutopia.org/no-train-no-gain>
- Teachers of English to Speakers of Other Languages International Association. (2018). *Teaching opportunities in the United States*. Retrieved from <https://www.thoughtco.com/high-esl-job-market-demand-4088711>
- Texas Education Code. (n.d.) Adaptations for Special Populations, §89.1210 a, §29.061c.
- Vasquez, L. W., & Pilgrim, J. (2017). A comparison of standards for teachers of English language learners. *The Texas Forum of Teacher Education*, 7, 38-43.

Appendix A
Survey Questions

1. Are you certified to teach ESL? (Yes/No)
2. Do you feel the state standards for working with ELLs prepared you to understand the relationship between the student's first language and their second language? (Yes/No)
3. Do you feel the state standards for working with ELLs prepared you to effectively provide explicit instruction to your ELLs? (Yes/No)
4. Do you feel the state standards for working with ELLs prepared you on how to differentiate instruction between your ELLs and English-Speaking students? (Yes/No)
5. Do you feel the state standards for working with ELLs prepared you to effectively assess your ELLs? (Yes/No)
6. Do you feel the state standards for working with ELLs prepared you to understand your role as the ESL teacher? (Yes/No)
7. What knowledge and skills were missing from your ESL teacher certification preparation? In other words, what skills do teachers need to know in order to work with ELLs? (Open-ended)
8. What knowledge and skills had you mastered from your ESL teacher certification preparation? (Open-ended)

WRITING INSIDE AND OUTSIDE THE BOX: YOUTH EXPERIENCES IN A COMMUNITY WRITING WORKSHOP

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Abstract

The STAAR high-stakes writing assessment influences classroom instruction and assessment practices in secondary level writing classrooms across Texas. As such, the authors and researchers, who are also parents of school-aged children in Texas as well as teacher educators, have noticed a change in the approach to teaching writing in some Texas ELA classrooms. This adaptation to the STAAR high-stakes writing assessment inspired the authors to research how youth participants in a free community writing workshop responded to an alternative writing environment. This qualitative research study examined the types of writing the youth participants produced in the writing workshop, the difference between the curriculum and environment of the writing workshop and a traditional ELA writing class, and the experiences of the youth participants in the workshop. Findings from this research suggest important lessons for preservice teachers and for educator preparation programs--namely, that curricular and assessment practices which mirror the STAAR high-stakes writing assessment may not contribute to positive student writing experiences--and suggest that adopting a non-traditional approach to designing writing environments may allow secondary level students to increase their writing productivity and enjoyment of writing.

Keywords: STAAR writing assessments, non-traditional educational settings

As teacher educators at a public university in Texas, our program prepares future EC-12 and secondary level teachers. A core part of teacher certification in Texas is training teacher candidates in disciplinary literacy, or advanced literary instruction embedded within content-area courses. One three-credit course (out of 24 total credits) in our program is dedicated to reading and writing strategies. Thus, we engage all of our preservice teacher candidates—regardless of the content area in which they are seeking certification—to incorporate the New Literacies which frame literacy as multifaceted, multimodal, and as a social and critical pedagogy within all subject matter (Leu, Kinzer, Coiro, Castek, & Henry, 2017). Our program also focuses on reflective practice, which means that regular and structured reflection on context, identity, research, and pedagogy is built into the preservice teacher curriculum (Beauchamp, 2015).

Throughout our program, but particularly in our disciplinary literacy course, our preservice teacher candidates share important lessons with us and with each other about their reading and writing experiences as EC-12 students. Some of these

lessons trouble us, both as parents of EC-12 students and as teacher educators. First, many report—in reflective essays and in class discussions—that they do not enjoy reading or writing, a reality which has been documented in research (Palacio, 2010). Sometimes, our preservice teachers (sophomores and juniors in college) admit that they have never read a book cover-to-cover. Second, they report that they had little to no experience at the secondary level with creative writing and, more recently, that they only learned and practiced writing during STAAR-writing-tested years. All of the writing they produced in middle and high school was expository and in preparation for STAAR test writing prompts. Third, their writing abilities are often very poor—both in terms of mechanics and more subjective things like voice and tone, etc.

In program meetings where we evaluate student data and work samples, we continued to circle back to the sharp differences between the writing skills and attitudes towards writing displayed by our preservice teacher candidates and the writing skills and attitudes displayed by middle school and high school students with whom we work during Barrio Writers, an annual free community writing workshop originally developed by Sarah Rafael García. These disparate experiences prompted us to conduct a qualitative research study to explore the ways in which the summer writing workshop diverged from traditional schooling practices. The broad research questions with which we began are as follows:

- 1) In what ways does the Barrio Writers curriculum and pedagogy differ from what participants experience in traditional Texas public school settings?
- 2) What kinds of writing do the youth participants produce in a non-traditional learning environment?
- 3) How do youth participants experience the Barrio Writers writing workshop?

Findings from this study suggest potential shifts in English Language Arts classroom practice to help secondary students produce more meaningful writing and to enjoy the writing process.

Background: Writing Environment in Texas Public Schools

In order to understand the writing environments which our summer Barrio Writers participants experience(d) in Texas public schools, we briefly review two relevant strands of research about secondary-level writing in public schools: (a) the impact of high-stakes testing on writing instruction and assessment in Texas secondary schools and (b) the difference between learning to write and writing to learn (Sorcinelli & Elbow, 1997).

First, high-stakes testing has far-reaching effects on school climate, curriculum, and assessment practices. In Texas, while newly adopted TEKS (Texas Essential Knowledge and Skills) (Texas Education Agency, 2018) indicate that writing should take place “on a daily basis with opportunities for cross-curricular content and student choice,” the state-mandated STAAR testing emphasis often forces teachers and schools to teach to the test (Anagnostopoulos, 2003; Neill, 2003; Jones, Jones, & Hargrove, 2003). In Applebee and Langer’s (2011) study, when high school teachers were asked about the importance of standardized tests, “state exams [were] rated as important or very important by 65.6%, followed by district exams (47.7%), SATs and ACTs (45.7%), and Advanced Placement or International Baccalaureate exams (30.4%)” (p. 17). Hillocks (2002) finds that while states like Oregon use assessments which include work samples and portfolios, this “emphasis on thinking, problem solving and reasoning” is not seen in Texas legislation that dictates test material. Furthermore, Hillock’s research suggests that, in Texas, teachers and administrators overwhelmingly see the “testing program as successful in improving writing,” thus suggesting that the test becomes the standard by which teachers judge “the boundaries of knowledge about composition and stipulates what should be taught” (p. 86). Indeed, in our local area, writing is only taught and practiced during STAAR-tested years. Applebee and Langer (2011) also found that teachers prepared their students for high-stakes exams by utilizing the “types of question that appear on the exam, and using sample questions from old exams or commercial practice materials that present similar items” and through “frequent use of rubrics or scoring systems similar to those that will be used on the exam” (p. 18). This means that students are often limited to writing that correlates with the high-stakes testing they will encounter at the end of the school year.

Second, research suggests that these kinds of restrictive environments are more closely aligned with learning to write rather than writing to learn (Sorcinelli & Elbow, 1997). Learning to write is a form of high-stakes writing that is most often associated with an academic activity. This type of writing is evaluated or graded by someone in a position of power over the author (the student) and can therefore create anxiety for both teachers and students (Sorcinelli & Elbow, 1997).

Mosley (2011) found that “high school students write mainly to conform . . . they want to know exactly how many words they need to write . . . and whether or not they are allowed to say ‘I’ in their piece” (p. 59). Applebee and Langer (2011) also noted that:

on average, only three percent of lesson time was devoted to longer writing requiring the student to produce a paragraph of coherent text. Personal and creative uses of writing had little place in the high school curriculum, occupying less than one half of one percent of lesson time (p. 30).

Apple and Langer (2011) contend that today’s students are not presented “with opportunities to use composing as a way to think through the issues, to show the depth or breadth of their knowledge, or to go beyond what they know in making connections and raising new issues” (p. 16). In these writing situations, the goal is utilizing a uniform process to create a specified product, which is what students will be asked to produce for a test like STAAR. For students, high-stakes learning to write means that they are placed in writing situations that are artificial and restrictive.

However, writing does not have to be a high-stakes undertaking; instead, it can be an activity for exploring and experimenting with ideas, feelings, and language. This type of writing is known as writing to learn. When employing writing to learn, “the goal is not so much to produce excellent pieces of writing as to increase how much students think about, understand, and learn” various topics (Sorcinelli & Elbow, 1997, p. 192). Writing to learn, a process-based pedagogy, employs strategies such as collaboration, time for self-evaluation, and production of multiple drafts. Process-based writing pedagogy is founded on the principle that “knowing how to compose (process) results in better-prepared writers than simply knowing what to compose (product), because research has indicated that good writers exhibit effective composing processes” (Blyler, 1987, p. 51). The process approach to writing includes two foundational principles: (1) student ownership through reflection and evaluation and (2) collaboratively working with peers (Blyler, 1987, Graham & Sandmel, 2011). Writing to learn, a highly social and active pedagogy, emphasizes working collaboratively, with peers and instructors, to evaluate and revise written work. This is the type of writing youth participants were encouraged to pursue while in Barrio Writers.

Study Context: Barrio Writers Writing Workshop

The Barrio Writers summer writing workshop is free and open to youth ages 13-21. The program focuses on recruiting youth from historically underrepresented populations but does not turn anyone away. In the year during which this study took place, we had 21 participants (ages 13-18) from four school districts in one rural East Texas county. Participants included 7 African Americans, 11 whites, 1 Latino, and 2 no race specified; 12 participants identified as female and 9 identified as male. Purposeful opportunistic sampling (Patton, 1990) included all the individuals who participated in the Barrio Writers workshop and consented to being part of the research group.

The week-long workshop, held at a public university campus in Texas, is staffed by three teacher education faculty members and one staff member. Each workshop day centers around a theme and includes daily freewriting periods, group readings and discussions, and a sharing/constructive feedback session. The workshop also includes a field trip to a local arts venue, a performance by a local guest artist/writer, and a visit from a college admissions officer. At the end of the workshop week, the youth participants hold a public reading for their family and community members during which they read a creative writing piece(s) they completed during the workshop. Each student has a piece published in an annual *Barrio Writers* anthology that includes creative writing across all chapters in Texas and California.

Research Design

Qualitative research methodology (Lincoln & Guba, 1985; Erlandson, Harris, Skipper, Allen, 1993) best fit the researchers’ open-ended research questions and the naturalistic setting of the research. As Merriam (1994) stated, “Qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (p. 5). A heuristic case study (Merriam, 1994) approach was determined to be the best research design, since the goal of heuristic case study is to produce a narrative for the reader to understand a particular phenomenon—in this case, the week-long Barrio Writers writing workshop. The four authors, who

played the dual roles of researcher and writing advisers, acted as participant observers (Spradley, 1980). The researchers obtained IRB approval from the university to ensure ethical treatment of human subjects.

Data sources included daily researchers' observation and reflective journaling completed by the faculty members as participant researchers during and after the workshop; faculty member participation in a self-study focus group a week after the workshop to debrief and deconstruct our experiences; artifacts from the workshop participants (including author bios and completed writing pieces); participant pre- and post-surveys; faculty analysis of the workshop syllabus and teaching strategies; and reflective responses from participants at the end of the workshop. These data sources were gathered and compiled during and after the workshop in order to capture the Barrio Writers phenomenon. These data sources were chosen according to the guidelines for naturalistic research described by Erlandson et al. (1993), who stated, "There are basically four general sources that the researcher utilized in naturalistic research: interviews, observations, documents, and artifacts (p. 85)."

After the workshop, all of the data was independently analyzed using the constant comparative method (Glaser and Strauss, 1967) with modified grounded theory and open coding to identify emergent themes (Glaser & Strauss, 1967; Lincoln & Guba, 1985). Each researcher compiled a document which listed their primary codes and themes arising from the data along with the source of evidences for those codes and themes. All four researchers then compared their individual analyses and collaboratively discussed common categories and themes using Kincheloe's bricolage as the format for the analysis and to determine findings (Kincheloe, 2001; Denzin & Lincoln, 2000). Triangulation among data sources, persistent observation, thick description, reflexive journaling, peer debriefing, and independent analysis ensured theoretical saturation (Glaser & Strauss, 1967) in order to produce trustworthy findings (Lincoln & Guba, 1985).

Findings and Discussion

Several important themes emerged from the triangulated independent data analysis process regarding the kinds of writing the youth participants produced and their perceptions of the writing environment. One finding emerging from the independent researcher observations, writing adviser focus groups, reflexive journals and participant surveys suggests that the Barrio Writers curriculum differs significantly from participants' traditional secondary school experiences. In contrast with the state-mandated TEKS and STAAR testing framework, the Barrio Writers curriculum is student-centered, flexible, culturally responsive, and linked to current issues—local, state, national, and global—that are relevant to participants' lives. Writing advisers collaboratively selected writing pieces for collective readings and discussions that centered around a theme for each workshop day. The daily themes for the workshop during the study were as follows: Deconstructing Oppression; Using All Language in Writing; Identity: Who Are You?; Language/Codeswitching; Your Voice is your Weapon. This environment is reflective of the writing to learn perspective, as it was an open environment that offered participants an opportunity to participate in "exploratory writing about a question or topic," but not a specific prompt or assignment (Sorcinelli & Elbow, 1997, p. 194).

Each workshop day (which lasted for three hours) followed a similar pattern. The workshop began with a 15-20 minute free-writing period, followed by a group reading and discussion period of 45-60 minutes, and then another 60-minute reading and writing period. Sorcinelli and Elbow (1997) argue that low stakes writing which occurs through freewriting can increase writers' fluency and confidence, as it provides them with an opportunity to take risks without judgement. The remainder of the available minutes was allotted for visits from guest speakers, snack breaks, and housekeeping issues. The participants spent approximately 60 minutes each day engaged in some form of writing. In the independent analysis of the Barrio Writers schedule, artifacts, researcher observations, and reflective journals, all of the researchers, who have had significant experience teaching in K-12 public school settings, noticed that the learning environment was much different from a traditional school environment. This finding was also supported by the Barrio Writer participants survey responses.

An important component of the Barrio Writers curriculum is its focus on writers of color and LGBTQIA writers who are often excluded from traditional English Language Arts classrooms. During our study, some of the authors whose work we read included the following: Malcolm X, Tupac (a rapper), Jamila Lyiscott (a social justice education scholar), and

several pieces from writers from other Barrio Writers chapters in Texas and California. When asked to identify aspects of the writing workshop that contributed the most to their learning, participants named particular texts we had read--such as “The Rose that Grew from Concrete” by Tupac—as well as two pieces we read by participants in our own local Barrio Writers chapters: “Gatsby by Ms. Alicia” (a writing adviser), and “the poem by Phoenix” (a participant from a previous year who wrote about being lonely and about grappling to come to terms with his identity. One participant said she liked that we read “our own writings and . . . former [Barrio Writers workshop] writers.”

A second finding is a divergence between the writing expectations imposed in traditional public-school classrooms and those imposed by the Barrio Writers summer workshop. In traditional school classrooms, STAAR writing tests, which are administered at grades 4 and 7 and in English I, II, and III, require students to write two compositions addressing specific purposes for writing. Students are provided one 26-line box on a page to write each composition, depending on the writing size of the child, on average this is approximately 250 words, if every line is used. While students may use all 26 lines to respond to each prompt, they cannot write more than 26 lines. Students are not allowed to add lines inside the box or to write outside the box. The high school tests are also timed: five hours to complete both the reading and writing portions of the exam. STAAR writing selections include literary nonfiction, expository, and persuasive writing. Furthermore, the focus of writing instruction is on STAAR preparation, which means that it includes only expository and persuasive writing in response to teacher- or test-selected readings and writing prompts.

In Barrio Writers, the expectations for student writing are simple: students need to write. Writing advisers did not impose any restrictions on participants’ writing, a contrast from the learning to write framework fostered by the STAAR-test learning environment. There are no minimum or maximum word limits, no required genres or formats, and no emphasis on grammar, spelling, or syntax. Participants were able to choose their own topics. Writing advisers did not censor student language or topic choice. The goal was simply for participants to use writing as a tool to express themselves and to advocate for themselves and for other youth and to produce at least one creative writing piece to share with the community and for publication. This aligns with Sorcinelli and Elbow’s (1997) belief that when utilizing a writing to learn approach, teachers should “urge students not to struggle too much to try to get the thoughts exactly right or the writing good,” but instead teachers should make it clear that the writing is for exploring and processing” (p. 1945).

The year we conducted this research study, all 21 Barrio Writers participants completed at least one writing piece (i.e., poem, narrative, nonfiction essay, or short story). Eleven participants completed one piece; nine participants completed 2-3 pieces, and one participant completed nine pieces. The writing pieces they submitted to the writing advisers ranged in length from 149 words to 2,447 words. Taken collectively, the participants averaged 630 written words, which is double the amount of words minimally required by the STAAR writing assessment. This does not count writing they produced independently and did not submit to the writing advisers. The table below shows the types of writing that the participants produced. The researchers independently examined each writing artifact and identified the genre of the artifact. The independent analyses were then compared, and the results of that triangulation are summarized in Table 1. Not one participant—when given complete freedom over their writing—chose to write expository or persuasive writing, which is the sole focus of their writing expectations at school.

Table 1
Types of Writing Produced

Poetry	Expository Essay	Persuasive Writing	Narrative Nonfiction	Short Story
28	0	0	7	8

In addition to identifying the types of writing the youth participants voluntarily produced, we also analyzed the student writing pieces for emergent themes. Again, individual analyses of student artifacts and triangulation were used to identify the themes present within the student writing artifacts. Fourteen of the twenty-one participants wrote pieces about the following themes, many of which echoed the themes of the writing pieces we collectively read during the workshop:

self-empowerment, self-love, self-discovery, conquering personal struggles, and overcoming fear. The participants' choice of themes and topics suggests a desire to write to learn about themselves, their socio-emotional identities, and their methods of coping with their environments and communities. This is a drastic contrast to the strict parameters of the STAAR ELA writing assessment, which only allows students to write expository or persuasive pieces, as well as many traditional ELA classroom curricula which similarly focus on expository or persuasive writing because that is what is tested on the STAAR writing assessments.

Another finding is that Barrio Writers participants were able to identify and elaborate upon several aspects of the Barrio Writers writing experiences that diverged from their traditional schooling experiences. First, when the participants were asked to identify in a post-experience survey what contributed the most to their productive writing during the Barrio Writers workshop, most named the egalitarian, open learning environment. The Barrio Writers learning space is intentionally focused on creating an environment with a diminished power hierarchy between youth participants and writing advisers. Many traditional classroom rules are deliberately set aside to promote a more relaxed environment, such as allowing freedom of movement, allowing youth participants to listen to music while writing, and not requiring them to do things like raise their hands before speaking. One participant said that Barrio Writers was “way more laid back than a usual school environment.” One participant said, “We got to call them (writing advisers) by their first names. They didn’t get upset at outbursts and [we] didn’t have to raise our hands.”

Several participants in the post-experience survey identified freedom of expression as significant to their learning during the Barrio Writers workshop. One said, “We were free to express ourselves without censorship” and another said, “Barrio Writers is very different. There are no wrong answers and no judgment.” This open learning environment may also be attributed to the process-based writing pedagogy that we employed in Barrio Writers, as such an approach “stresses that it is *essential*, not optional or merely desirable, that at least the instructor and often other members of the class respond to and provide feedback on each stage of the process” (Barnhisel, Stoddard, & Gorman, 2012, p.464). The Barrio Writers writing advisers worked to “create a supportive and nonthreatening writing environment,” as required for a process-based writing. This environment was memorable for the participants.

A second difference identified by participants in the post-experience survey, researchers' observations, reflexive journals and focus groups is the sense of community in Barrio Writers—which is a central tenet of the program and the literal meaning behind the word “barrio” (community). In just one short week, participants and writing advisers developed a community of peers. We discussed, collaborated, experienced, encouraged, critiqued, and performed with each other. All participants in the workshop were expected to participate and were called upon to participate actively. In post-workshop surveys, many participants referenced genuine relationships with co-participants and with writing advisers as important. For instance, one participant noted that the thing that contributed most to their productive writing was “being able to talk to people that have the same passion.” Another mentioned that we were “positive” and “opening up to each other” as being contributing factors. Five participants identified the “writing advisers” as being key to the learning experience for them. This connection between the writing advisers and the Barrio Writers participants was also documented in the observations of the researchers, and again in the reflexive journals and focus groups.

Participants also noted in the post-experience survey that they enjoyed and benefited from the group discussions and collaborative writing experiences that are part of the Barrio Writers curriculum. One participant responded, “I enjoyed doing collaborative writing with everyone else” while another echoed: “Working together as a group assignment. I love meeting new people at Barrio Writers.” Another noted that collaborative writing was new to them and said, “I’m used to working alone by myself, but it is fun to work together as a group.” These findings suggest that community building activities, overlapping with the relaxed, “unstructured” environment that encouraged dialogue and discussion and sharing of ideas and writing, created a safe space in which to live and to work. A process-based pedagogy can enable student ownership through reflection, evaluation, and collaboration (Blyler, 1987; Graham & Sandmel, 2011). The collaboration between peers and writing advisers that occurred over just a week of Barrio Writers seemed to enable the writers to feel less restricted and experience unique interactions with their peers. Data analysis suggests that through these interactions, a community was created that connected participants to work with others in new ways that were impactful and positive.

Conclusion and Recommendations for Practice

Findings from this research study suggest a number of valuable practical applications for classroom practice—not just in English Language Arts classrooms, but across the secondary level curriculum. First, expanding student choice in the curriculum is key. Findings from this study suggest that ELA teachers need to provide a wider range of genre options for students to write about in addition to expository, literary, and persuasive. Applications of this finding include other content areas as well which could benefit from expanding the state-mandated expectations and requirements to include more variety and student choice. Second, there is a real need to provide instruction and assessment that are authentic and that could take place within real contexts, both within and outside the traditional school walls. For our Barrio Writers participants, the Barrio Writers experience is writing for a real purpose (i.e., self-expression and for eventual publication in an annual anthology) and for real audiences (i.e., the concluding literary reading and future readers of the published book). Barrio Writers is a welcome departure from the writing they do in school, which is inauthentic, for a purpose that is not meaningful to them (i.e., receiving a state test score), and for an audience they will never see and with whom they will never interact (i.e., the STAAR test graders). Third, findings from this study suggest that there is a lot of opportunity to expand collaborative writing work, a strategy which our participants had never experienced. Traditional schooling promotes independent work and may not equip students with how to work successfully as a team—perhaps especially in writing. Fourth, findings from this study highlight the importance of listening to student voice. Teachers should look to students’ culture and current social issues to frame learning activities across the curriculum in order to meet the needs of diverse student populations. Teachers should seek ways to expand opportunities for students to talk to each other and to their teachers through writing, uncensored and without the worry about receiving a grade or suggestions for improvement.

As teacher educators who are preparing the rising generation of Texas teachers, we empathize with Texas teachers who face enormous pressure from the state legislature and their district administrators to ensure their students’ success on high-stakes tests. Additionally, we are troubled by studies, like Kiuvara, Graham, and Hawken’s (2009), which found that 71% of teachers surveyed said they “received minimal to no preparation to teach writing during college (preservice preparation)”; 44% of inservice teachers reported minimal additional on-the-job professional development. As teacher educators who want to prepare our teacher candidates to be effective writing teachers and to encourage writing across the curriculum in their future classrooms, findings from this study suggest several important steps educator preparation programs can take. First, teacher educators can be intentional about the texts we select for our courses. As we strive to do in Barrio Writers, teacher educators can choose texts written by youth, by women, and by writers of color to both inspire their preservice teachers and to further prepare them to successfully work with diverse student populations. Second, teacher educators can consider modeling the kinds of practices identified by youth participants as being significant to their growth as writers and as learners. For us, in our teacher education courses, that means that we start our classes with what some of us call a “power write”—an approximately 5 minute period where students free-write about the topic of the day or about an assigned text. We try to choose creative writing pieces written by youth, when possible, that link to our curricular topics (i.e., a piece of writing where a youth author talks about the impact of language on their identity or how a teacher or the school environment affects them). In our professional experience, these kinds of texts capture our preservice teachers’ attention more effectively than textbook chapters and articles. Third, we encourage our preservice teachers to critically analyze state standards and research-based best practices in writing instruction and identify where they converge and diverge. We also encourage and provide them opportunities to practice advocating for or against local, state, and federal policies and laws that will impact their future students by contacting legislators and responding to public feedback opportunities on matters relevant to public education in general and to ELAR teaching in particular.

Findings from this research echo other extant research, which suggests that the emphasis on high-stakes testing creates a stressful and restrictive learning environment in conflict with a writing to learn framework. Despite this unfortunate reality, we are encouraged by our experiences in the Barrio Writers summer writing workshop and by this study’s findings and strive to equip our preservice teacher candidates with practical ways to transform their future classrooms to create empowering, community spaces where students can enjoy writing and learn to use writing to express themselves and to advocate for themselves and other youth.

References

- Anagnostopoulos, D. (2003). The new accountability, student failure, and teachers' work in urban high schools. *Educational Policy, 17*(3), 291-316.
- Applebee, A., & Langer, J. (2011). "EJ" Extra: A snapshot of writing instruction in middle schools and high schools. *The English Journal, 100*(6), 14-27.
- Barnhisel, G., Stoddard, E., & Gorman, J. (2012). Incorporating process-based writing pedagogy into first-year learning communities: Strategies and outcomes. *The Journal of General Education, 61*(4), 461-487.
- Beauchamp, C. (2015). Reflection in teacher education: Issues emerging from a review of current literature. *Reflective Practice, 16*(1), 123-141.
- Blyler, N. R. (1987). Process-based pedagogy in professional writing. *Journal of Business Communication, 24*(1), 51-60.
- Denzin, N. & Lincoln, Y. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Erlanson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods*. Thousand Oaks, CA: Sage.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Rutgers, NJ: Transaction Publishers.
- Graham, S., & Sandmel, K. (2011). The process writing approach: A meta-analysis. *The Journal of Educational Research, 104*(6), 396-407.
- Hillocks, G. (2002). *The testing trap: How state writing assessments control learning*. New York, NY: Teachers College Press.
- Jones, M. G., Jones, B. D., & Hargrove, T. Y. (2003). *The unintended consequences of high-stakes testing*. Lanham, MD: Rowman & Littlefield Publishers.
- Kincheloe, J. L. (2001). Describing the bricolage: Conceptualizing a new rigor in qualitative research. *Qualitative inquiry, 7*(6), 679-692.
- Kiuhara, S. A., Graham, S., & Hawken, L. S. (2009). Teaching writing to high school students: A national survey. *Journal of Educational Psychology, 101*(1), 136-160.
- Leu, D. J., Kinzer, C. K., Coiro, J., Castek, J., & Henry, L. A. (2017). New Literacies: A dual-level theory of the changing nature of literacy, instruction, and assessment. *Journal of Education, 197*(2), 1-18.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalist inquiry*. Beverly Hills, CA: Sage.
- Merriam, S. B. (1994). *Qualitative research and case study applications in education. Revised and expanded from "Case study research in education."* San Francisco, CA: Jossey-Bass Publishers
- Mosley, M. (2011). The truth about high school English. In P. Sullivan & H. Tinberg (Eds.), *What is college level writing?* (pp. 58-68). Urbana, IL: National Council of Teachers of English.
- Neill, M. (2003). Leaving children behind: How *No Child Left Behind* will fail our children. *Phi Delta Kappan, 85*(3): 225-228.
- Palacio, K. (2010). *Re-centering students' attitudes about writing: A qualitative study of the effects of a high school writing center*. Master's thesis. Nova Southeastern University. Retrieved from NSU Works, Farquhar College of Arts and Sciences. (2) http://nsuworks.nova.edu/writing_etd/2.
- Patton, M.Q. (1990). *Qualitative evaluation and research methods*. Thousand Oaks, CA: Sage.
- Sorcinelli, M., & Elbow, P. (1997). Writing to learn: Strategies for assigning and responding to writing across the disciplines (Jossey-Bass higher and adult education series). San Francisco, CA: Jossey-Bass.
- Spradley, J. P. (1980). *Participant observation*. New York: Wadsworth Thomson Learning.
- Texas Education Agency. (2018). Texas Essential Knowledge and Skills: English. Retrieved from <http://ritter.tea.state.tx.us/rules/tac/chapter110/ch110c.html#110.38>

DOES EXPOSURE TO HIGHER LEVEL MATHEMATICS AFFECT PROBLEM SOLVING?

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Abstract

Does exposure to higher level mathematics affect problem solving, and therefore, critical thinking? To answer this question, a group of students from a small rural high school were presented with a constructivist problem that contained multiple entry points and multiple solution pathways. The students were asked to solve the problem in as many ways as possible and then justify or prove their answer to someone else. The problem posed to the students was how many unique towers could be constructed from two different colors of cubes and the towers were four cubes tall. The students were enrolled in Algebra 1, statistics, and pre-calculus. Results were evaluated in accordance with a rubric. The results indicated that exposure to higher level mathematics did not necessarily correlate into more sophisticated solution methods.

Keywords: problem solving, critical thinking, mathematical justification and informal

As part of the researcher's master's program, the researcher watched many videos that documented Dr. Maher's longitudinal study of problem solving and justification. She followed a group of children from second grade through twelfth and would occasionally present them with various mathematical challenges. One of the problems presented in the second grade was the tower problem. The tower problem involved determining how many towers can be built that were four units high, given two colors. She focused on asking them how they knew they had the answer. She was asking them to prove their conclusions in an informal way (Maher, 2011). The researcher thought that this would be a good problem to present to my students about needing to prove or convince somebody else of your conclusion or position. We do this all the time in real life, whether it is asking for a pay raise or spouses deciding on a restaurant. Trial lawyers make a living convincing others that what they say is true. The foundation for justifying one's position is laid in mathematical proofs. The *State of Texas Mathematical Process Standards* for high school students states that students are expected to "display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication" (19 TAC, 2012, para. 111.41).

It would stand to reason that as children are exposed to increasingly more sophisticated mathematics, both conceptually and mechanically, then the types of solutions and their justifications for those solutions should also become more sophisticated. Does higher level mathematics lead to higher level thinking and, therefore, more complex solutions? Or, on the other hand, will students, and people in general, opt for a simpler solution that just solves the problem at hand? The expected outcomes are that Algebra 1 students will produce solutions that are less complex than students enrolled in statistics or pre-calculus. It is also expected that some variance will occur between the statistics group and the pre-calculus group.

The primary research question is: Does exposure to higher level mathematics affect problem solving?

The secondary research question is: In what ways does exposure to different levels of mathematics affect students' critical thinking when presented with a problem involving multiple entry points?

Literature Review

Critical Thinking

In the current climate of preparing students to be college and career ready, a significant mandate under state and federal law is to elevate the students' level of problem solving and critical thinking. It is a specific objective under the Public Law 107-110, commonly referred to as the No Child Left Behind Act (107th Congress, 2001) and its successor, Every Student Succeeds Act of 2015 ("114th Congress", 2015). On the state and local level, 42 states have adopted the Common Core State Standards ("Standards in your State", 2016) which also strongly emphasize critical thinking ("P21 Toolkit," 2011). Although Texas has not adopted Common Core, its own state standards also contain elements that are specifically directed at critical thinking ("House Bill 5", 2014). According to Scriven and Paul (n.d.), "critical thinking" is the process of analyzing, synthesizing, and/or evaluating information and entails the examination of reasoning leading to conclusions.

Problem Solving

The concept of problem solving has changed over the years. Decades ago grade school and high school students were taught to use formulas to solve various questions. If students could do this, they were good at math. Word problems were usually given as an enrichment exercise (Lester, 1994). The problem was that you could be a good test-taker and still have low critical thinking skills. In the 1980s and 1990s, the role of metacognition came to the forefront and word problems involving a real world or situation context became the norm (Cai & Lester, 2010). The focus has shifted to presenting students with problems that have multiple entry points with multiple solution pathways (NCTM, 1989). Furthermore, students can better understand theorems by participating in their discovery and proof (Nord, Malm, & Nord, 2002).

The question then becomes what is a good or worthwhile problem? According to the National Council of Teachers of Mathematics (1991), a worthwhile mathematical question directs students to investigate important mathematical ideas and ways of thinking, usually towards a learning objective. Cai and Lester (2010, p. 5) set forth a list of ten criteria for worthwhile problems. Their criteria are as follows:

- 1) The problem has important, useful mathematics embedded in it.
- 2) The problem requires higher-level thinking and problem solving.
- 3) The problem contributes to the conceptual development of students.
- 4) The problem creates an opportunity for the teacher to assess what the students are learning and where they are having trouble.
- 5) The problem can be approached by students in multiple ways using different solution strategies.
- 6) The problem has various solutions or allows different decisions or positions to be taken or defended.
- 7) The problem encourages student engagement and discourse.
- 8) The problem connects to other important mathematical ideas.
- 9) The problem promotes the skillful use of mathematics.
- 10) The problem provides an opportunity to practice important skills.

Of course, it is unreasonable to expect every question to meet all ten criteria. Earlier, Smith and Stein (1998) developed a list of characteristics describing four levels of cognitive demand. Those levels of cognitive demand are lower-level demands (memorization), lower-level demands (procedures without connections), higher-level demands (procedures with connections), and higher-level demands (doing mathematics). The first two levels (memorization and procedures without connections) correlate to the lower levels of Bloom's Taxonomy and involve the memorization and use of formulas.

An example would be to find the intersection of two given linear equations. The third category (procedures with connections) involves the decoding of word problems. The last category (doing mathematics) deserves further elaboration. According to Smith and Stein (1998, p. 348), the characteristics of doing mathematics are as follows:

- Require complex and nonalgorithmic thinking – a predictable, well-rehearsed approach or pathway is not explicitly suggested by the task, task instructions, or a worked-out example.

- Require students to explore and understand the nature of mathematical concepts, processes, or relationships.
- Demand self-monitoring or self-regulation of one's own cognitive processes.
- Require students to access relevant knowledge and experiences and make appropriate use of them in working through the task.
- Require students to analyze the task and actively examine task constraints that may limit possible solution strategies and solution.
- Require considerable cognitive effort and may involve some level of anxiety for the student because of the unpredictable nature of the solution process required.

According to Mueller, Yankelewitz, and Maher (2014), meaningful mathematical learning involves selecting challenging, open-ended tasks that require students to extend their learning and justify their solutions.

Teaching Strategies

Teaching strategies have changed over the years from rote memorization of formulae with purely mechanical drill application to modern constructivism in which the student is given the freedom to formulate their own conclusions and only those conclusions may therefore be considered valid (Schoenfeld, 1992). These two extremes can be exemplified using an economic analogy. The former strategy declares there is only a single way to solve a problem. Even though other processes may lead to the same conclusion, if the prescribed method is not used, the conclusion is invalid. This is akin to a rigorously controlled centralist economy such as North Korea. The latter strategy postulates that the only valid conclusions are the ones the students themselves make. This is reminiscent of the *laissez-faire* economic model of Adam Smith and others that proposed no government (i.e. teacher) intervention was needed and an “invisible hand” would lead the market to regulate itself for the benefit of all. Neither of these strategies, on its own, is practical. The first stifles independent thought and the second is open to false conclusions based on invalid assumptions. The optimal strategy is somewhere in-between.

The current high school curriculum often does not allow for discovery learning tasks designed to allow students to formulate and develop valid conclusions. Boaler (2016) and Flynn (2017) both advocate for tasks that have many entry points, multiple solution pathways, and multiple representations. Seeley (2017) advocates for an “upside-down” teaching model that is teacher-structured but centered on student thinking.

Best practices state that the best learning environment is student-centered, but teacher led (Dougherty & Rutherford, 2009). Student-centered learning leads students to have awareness that they are responsible for their own learning and gives them responsibility for their conclusions (Maher, 2002).

Methodology

Purpose and Research Questions

The purpose of this project was to investigate whether exposure to higher level mathematics affect the complexity of students' problem-solving skills and does exposure to different levels of mathematics affect a students' critical thinking when presented with a problem involving multiple entry points?

Setting and Participants

Potential participants were approximately 80 high school students. These individuals were between 15-18 years of age and in generally good health. Approximately 53% were males and 47% were females. Hispanic students comprised 40% of the population, white students were 55%, with the remaining 5% made up of African American students or people of two or more races. Approximately 25% were considered “at risk” and 53% were classified as economically disadvantaged. Target groups were students enrolled in Algebra 1, statistics and pre-calculus. Contact was made by the high school counselor during a normal school day during normal class hours. It was made clear that this event will be a collaborative learning opportunity and that the results will be used for this study. Anyone whose parents have declined to give consent to

the research aspect of the project will still participate in the problem-solving exercise as part of regular class activities, but their data set will not be included in the analysis.

Procedures

The researcher focused on one aspect of critical thinking (the process of analyzing, synthesizing, and/or evaluating information) and observed the types of reasoning leading to a conclusion. The observed students were divided into three distinct groups: those enrolled in Algebra 1, those enrolled in statistics, and those enrolled in pre-calculus. Working in small groups, all students were given the same open-ended question using a physical model that has a simple answer and asked to formulate a justification or proof that would convince someone else that their answer was correct. The exercise is modeled on one used by Dr. Maher during her Longitudinal Study (Maher, 2011). They were also asked to extrapolate or extend their solution to a similar problem that cannot be physically modeled. Justifications were categorized by their complexity in accordance with a rubric (Table 1).

Students were divided into groups of 2-3 and given an instruction sheet and 40 Unifix cubes of one color and 40 cubes of a different color (Figure 1).

The Towers Problem

Towers

How many different towers four cubes tall can be constructed when you have two colors of cubes from which to choose? The tower is built from Unifix cubes and should be able to sit flat, as shown.



Is there a way to predict the number of possible different towers, given the height of a tower and choosing cubes from two colors?

How would you convince or prove to someone else that you know you have the correct answer? How many different ways can you think of to do this?

Figure 1. The Towers Problem

They were asked to find how many different towers four cubes tall could be created and how they would justify or prove their conclusion to someone else. They were asked to record their solution(s) on the instruction sheet. Three 45-minute class periods were allotted for this activity. The completed Towers worksheet was collected and used to analyze the complexity of the solutions. The following rubric was used.

Table 1
Analysis Rubric

Level of Complexity	Description
Simple	Answer is only the correct numerical value, or the justification only uses the concept of doubling. Lacks mathematical formulation or evidence of logical deduction.
Moderate	Answer is the correct numerical value justified by a binary formula (2^4) or logical deduction in the form of a tree diagram or case analysis.
Intermediate	Answer is the correct numerical value justified by using Pascal's Triangle, a summation of combinatorics, or demonstrates evidence of abstraction from the concrete model.
Advanced	Answer is the correct numerical value justified by a full binomial expansion, $(x+y)^4$, or demonstrates some process to mathematically determine the composition of a tower or group of towers by abstraction of the problem, number of cubes per color. Demonstrates abstraction of the problem.

The number of responses per category for both groups was tallied, converted to a percent output, and then represented graphically. The relative distributions of each answer category were then compared between the three groups (Algebra 1, statistics, and pre-calculus) to determine if the students exposed to higher level mathematics demonstrate more complex problem-solving methodologies and, therefore, higher levels of critical thinking.

Qualitative Methods

The primary research question is: Does exposure to higher level mathematics affect problem solving?

The secondary research question is: In what ways does exposure to different levels of mathematics affect a students' critical thinking when presented with a problem involving multiple entry points?

To answer these questions, the students' written responses were analyzed for emerging themes. Common themes were coded using different colored highlighters as they were related to the primary and secondary research questions.

Quantitative Methods

The sophistication of student responses was analyzed in accordance with the above rubric, percentages were calculated by category, and relative frequencies were represented graphically.

Results

There were 77 students that returned the required consent and assent forms. They were divided into 37 groups of two to three students that resulted in $n=37$ data points. The output was sorted by class type (algebra, statistics and pre-calculus) and rubric category. During the sorting process, it was discovered that some students did not generate the correct answer. This outcome was not anticipated at the outset of the project. A fifth category, Incorrect, was added to the rubric to account for these results. The new rubric is shown in Table 2 below.

Table 2
Revised Analysis Rubric 2

Level of Complexity	Description
Incorrect	The correct numerical answer is not provided or there is a gross logical error.
Simple	Answer is only the correct numerical value, or the justification only uses the concept of doubling. Lacks mathematical formulation or evidence of logical deduction.
Moderate	Answer is the correct numerical value justified by a binary formula (2^4) or logical deduction in the form of a tree diagram or case analysis.
Intermediate	Answer is the correct numerical value justified by using Pascal's Triangle, a summation of combinatorics, or demonstrates evidence of abstraction from the concrete model.
Advanced	Answer is the correct numerical value justified by a full binomial expansion, $(x+y)^4$, or demonstrates some process to mathematically determine the composition of a tower or group of towers by abstraction of the problem, number of cubes per color. Demonstrates abstraction of the problem.

The results of the students' answer complexity by class category are summarized in Table 3.

Table 3
Answer Complexity Results Matrix

Class	Incorrect	Simple	Moderate	Intermediate	Advanced	Total
Algebra 1	2	13	4	2	0	21
Statistics	0	2	3	2	1	8
Pre-calculus	5	2	1	0	0	8
Total	7	17	8	4	1	37

The following graphical representations of the data are provided for the reader. Figure 2 represents the percentage Incorrect by class type. The percentages are as follows: Algebra 1 $\approx 29\%$, Statistics $\approx 0\%$, Pre-calculus $\approx 71\%$. An example of a commonly reported incorrect response would be 32.

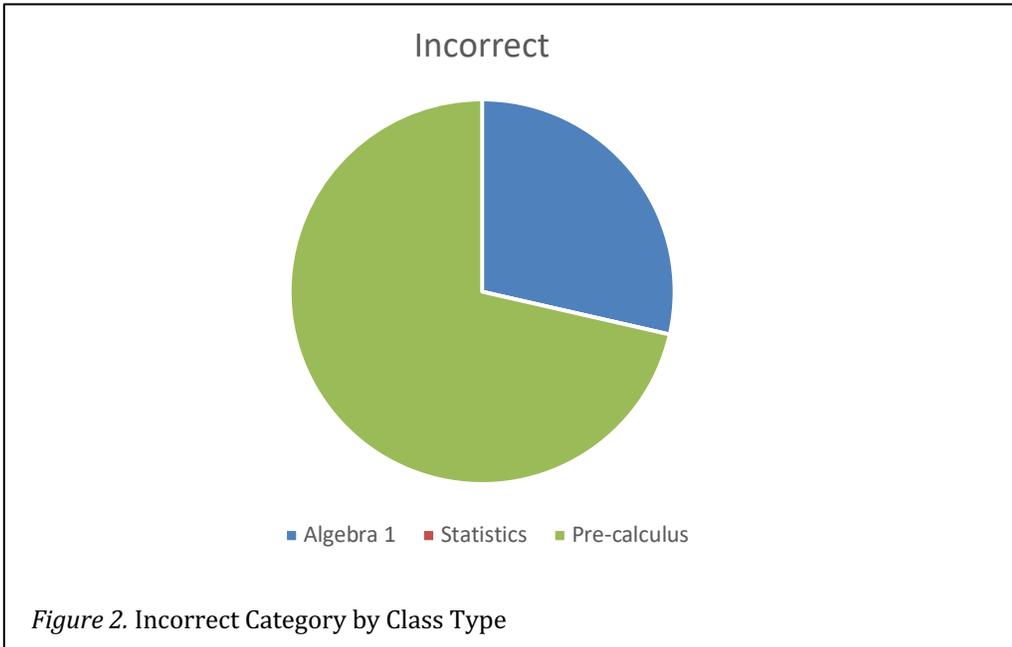


Figure 3 represents the percentage of responses classified as Simple by class type. The percentages are as follows: Algebra 1 ≈ 76%, Statistics ≈ 12%, Pre-calculus ≈ 12%. An example of a simple response would be 16 without any explanation.

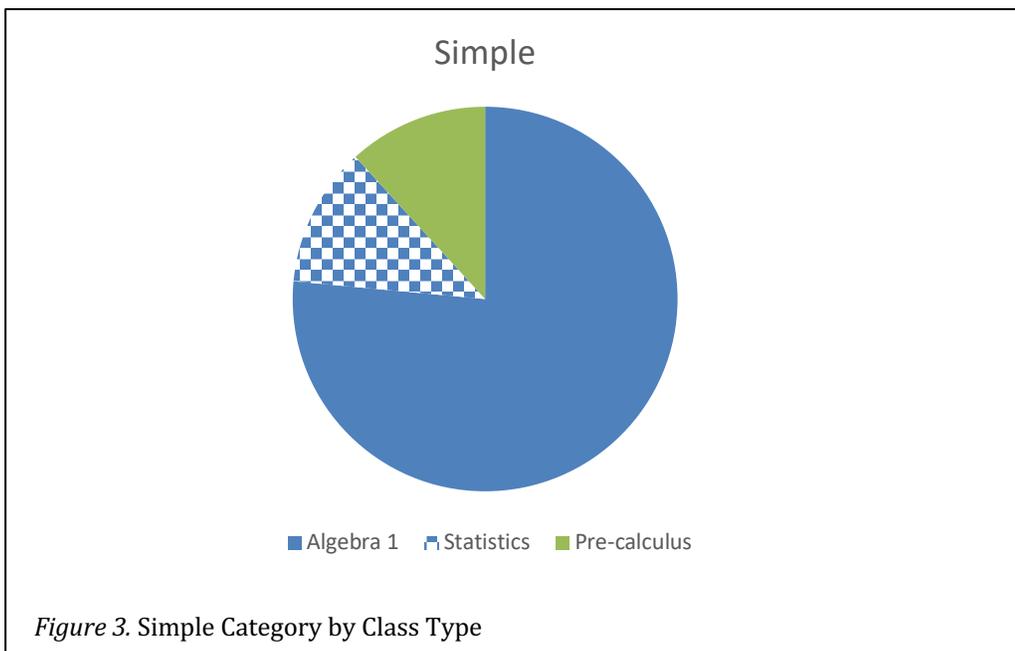


Figure 4 represents the percentage of responses classified as Moderate by class type. The percentages are as follows: Algebra 1≈50%, Statistics≈38%, Pre-calculus≈13%. An example of a moderate response would be analyzing all of the possible cases to arrive at the answer of 16.

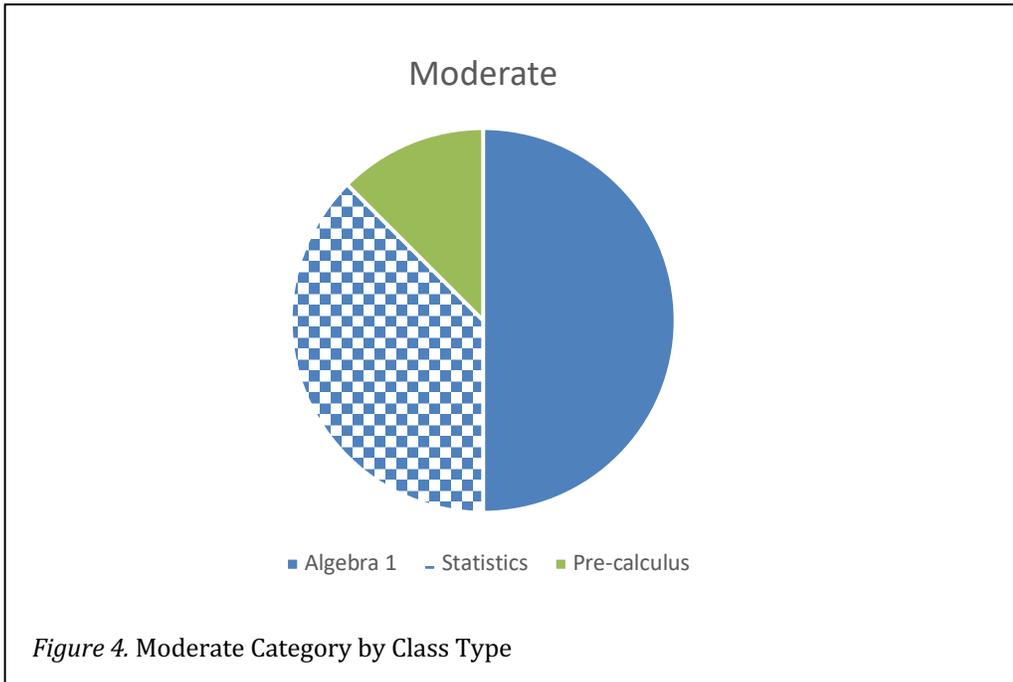


Figure 5 represents the percentage of responses classified as Intermediate by class type. The percentages are as follows: Algebra 1≈50%, Statistics≈50%, Pre-calculus≈0%. An example of an intermediate response would be using Pascal’s Triangle to arrive at the answer of 16.

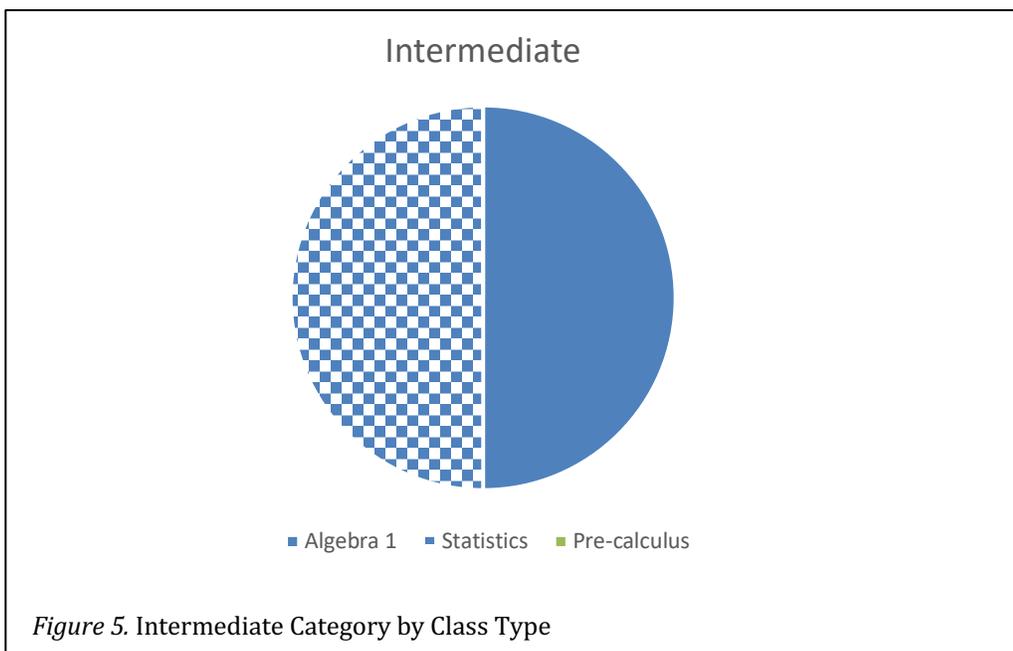


Figure 6 represents the percentage of responses classified as Advanced by class type. The percentages are as follows: Algebra 1 \approx 0%, Statistics \approx 100%, Pre-calculus \approx 0%. An example of an advanced response would be to use the binomial expansion to justify the conclusion of 16.

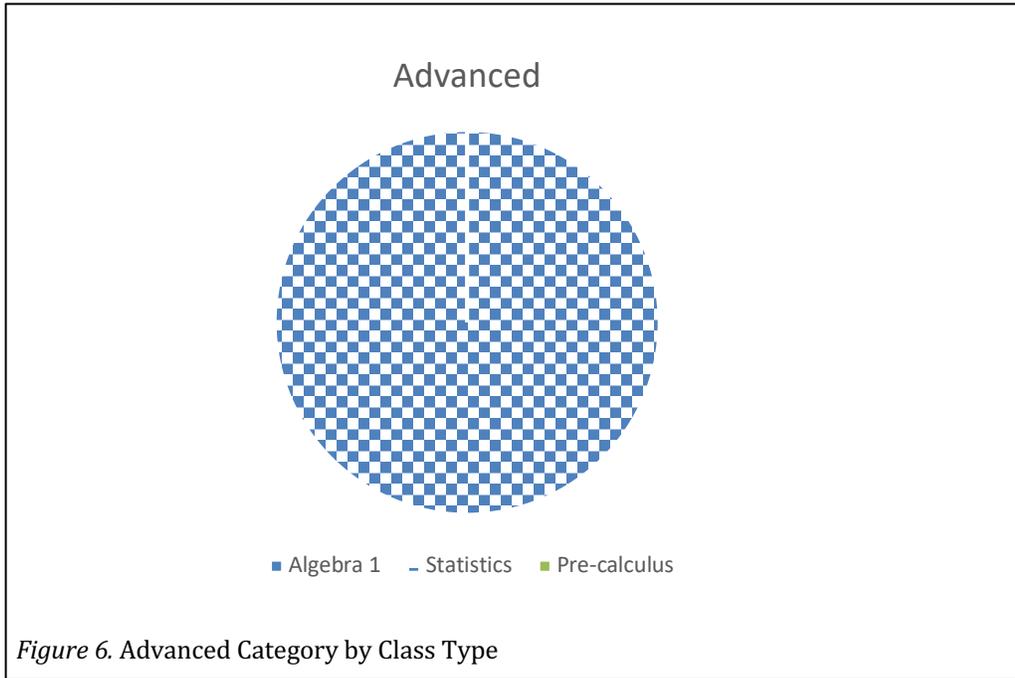


Figure 6. Advanced Category by Class Type

Figure 7 shows the category distribution for Algebra 1.

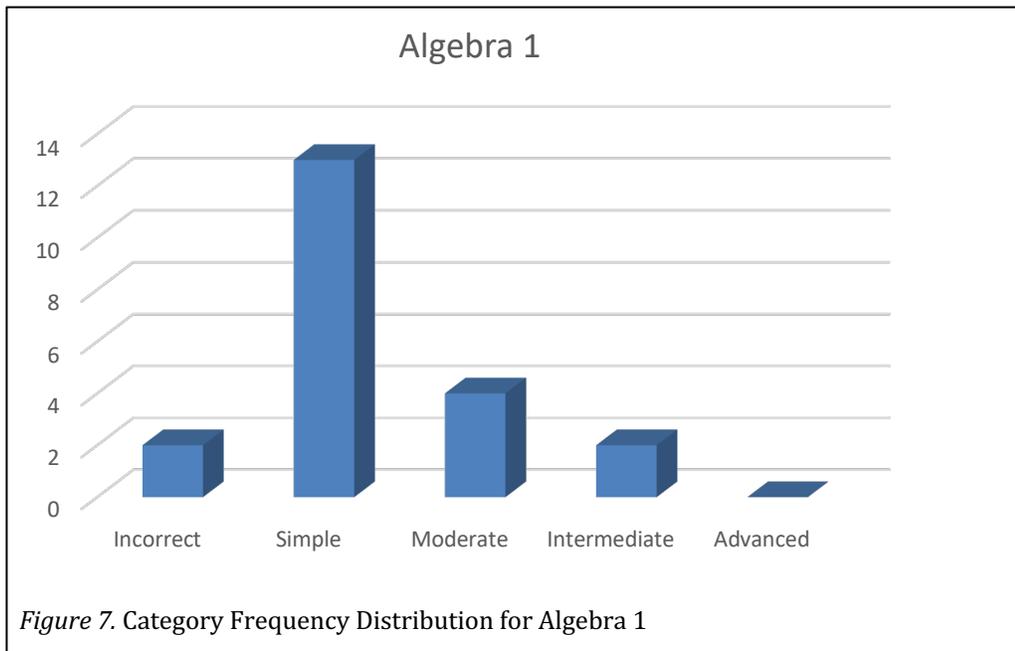


Figure 7. Category Frequency Distribution for Algebra 1

Figure 8 shows the category distribution for Statistics.

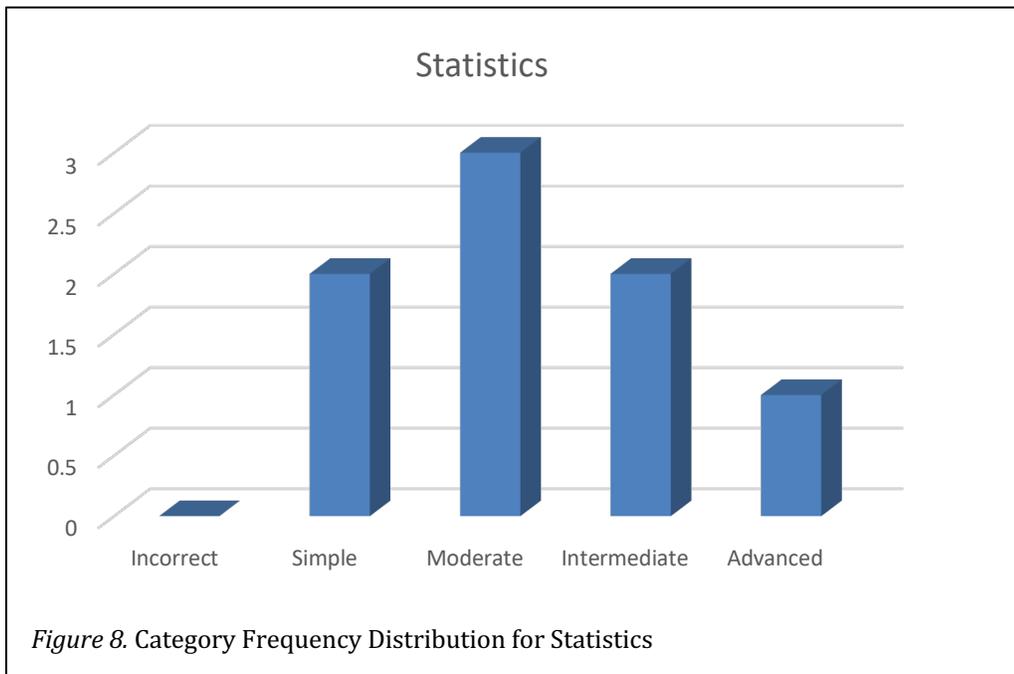


Figure 9 shows the category distribution for Pre-calculus.

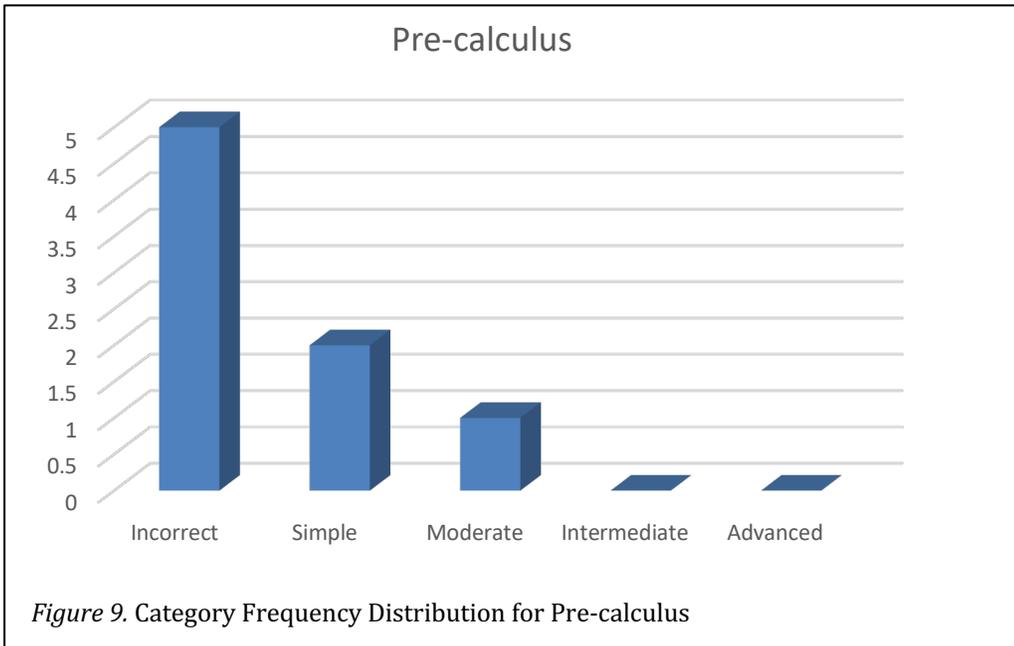
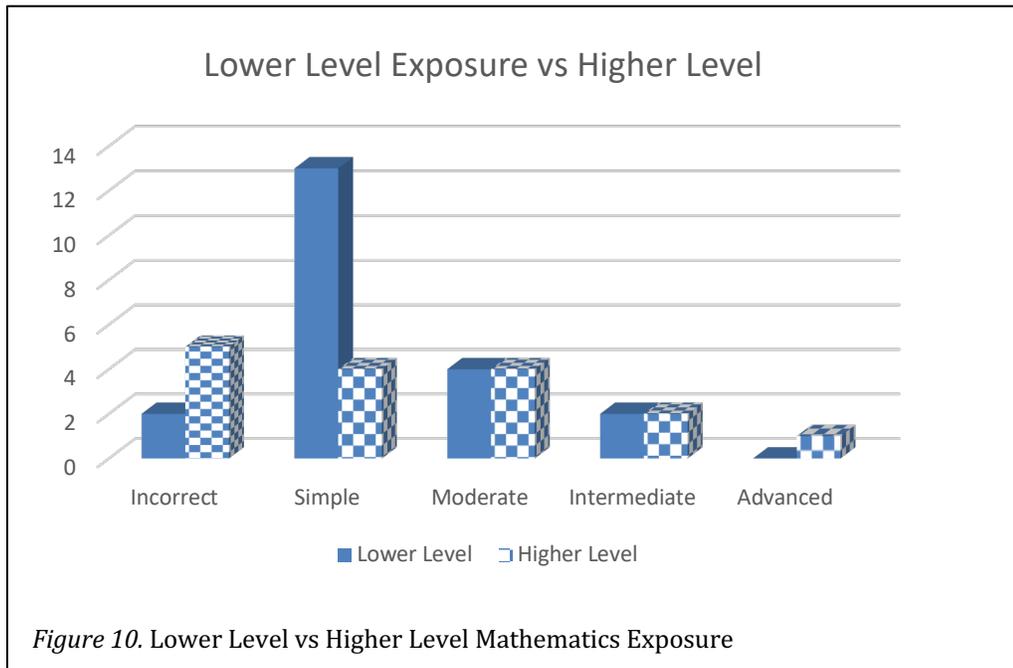


Figure 10 shows the frequency distribution of students exposed to lower level mathematics (Algebra 1) compared to those exposed to higher level mathematics (statistics and pre-calculus combined).



Observed Patterns and Themes

The following patterns and themes were observed by the researcher:

- There was a need to modify the original rubric to include a category for incorrect answers.
- Of the seven samples classified as incorrect, only one attempted a tree diagram and only one attempted a concrete model.
- The most common incorrect answer was 32 (4 of 7).
- 41% of the responses that were classified as simple gave a generalization as 4^2 which is the correct answer, 16, but demonstrates incorrect logic.
- Approximately 59% of the algebra students used some form of concrete modeling.
- Only the statistics students used any form of combinatorics.
- When comparing lower level versus higher level mathematics exposure, the number of responses in the top three categories is approximately equivalent.

Discussion

Analysis

It would stand to reason that as children are exposed to increasingly more sophisticated mathematics, both conceptually and mechanically, then the types of solutions and their justifications for those solutions should also become more sophisticated.

As a reminder, the primary research question is: Does exposure to higher level mathematics affect problem solving? The expectation was that students that had a lower level of exposure to mathematics would have more responses in the Simple and Moderate categories and students with more exposure would have more responses in the Intermediate and Advanced categories. Although the former was true, the latter was not. There were, in fact, a higher percentage of Incorrect responses for the higher-level group than the lower level one. Part of the reason may be that the students in the higher-level

group attempted to develop a purely abstract model from the outset which is evidenced by the lack of concrete modeling by those students and a common assertion that the answer was 32, exactly twice as big as it should be.

Among the three higher categories (Moderate, Intermediate, and Advanced) a Chi-Square analysis could not be completed due to not meeting the required test assumptions; however, there appears to be no meaningful difference between the two groups. The results do not support the conjecture that exposure to higher level mathematics leads to more complex solutions indicative of higher levels of critical thinking.

The secondary research question is: In what ways does exposure to different levels of mathematics affect students' critical thinking when presented with a problem involving multiple entry points? Students must be trained from an early age to learn how to solve problems with multiple entry points and multiple solution pathways. At the beginning of this project, it never occurred to the researcher that some students would not be able to solve the problem at a minimal level given that the students had manipulatives to aid in visualization of the problem. It is thought that without a clearly defined problem type or entry point, students had difficulty in developing an effective problem-solving strategy. For students, overall, to be capable and competent with constructivist problems, it cannot be an occasional experience but must be a long-term process imbedded as part of a comprehensive curriculum.

Limitations

One limitation was the small sample size. This project was conducted in a small rural high school in a Title 1 district in north Texas. The average graduating class is approximately 40 students. In an environment with a larger population, the results would probably be significantly different.

A second limitation, which is directly related to the small school population, is that there are only two mathematics teachers on the high school staff. This limits the students' experience regarding teaching styles. This lack of instructional diversity may account for some of the observed results, particularly between the statistics and pre-calculus groups.

Implications for Further Study

A more accurate conclusion might be obtained by obtaining a larger sample size, either from a larger school or across a series of schools. This would also negate the lack of instructional diversity mentioned above.

Although not part of this study, it may be interesting to track and account for students that are identified as special education (SPED) and/or gifted and talented (GT). These students were part of this project, but the data could not be disaggregated into SPED and GT. It would have been interesting to note how the results would have been affected with this additional level of disaggregated data.

Conclusions

The results of this study have implications for both preservice and in-service teachers. Frequently, preservice teachers, and some in-service teachers, believe that open-ended and problem-solving tasks are too complicated or time consuming to be of value and take time away from the daily standard. However, tasks of this nature reveal unexpected answers, both correct and incorrect, lead to a deeper understanding of how students think and construct mathematical arguments and address multiple standards in a single lesson.

References

- 19 TAC Chapter 111. Texas Essential Knowledge and Skills for Mathematics. (n.d.). Retrieved from <http://ritter.tea.state.tx.us/rules/tac/chapter111/index.html>
- 107th Congress (2001). Public law 107-110. *Congressional Record*, 147, 146. Retrieved from <http://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf>
- 114th Congress (2015). Public law 114-95, Every student succeeds act. *Congressional Record*, 161, 136. Retrieved from <https://www.congress.gov/public-laws/114th-congress>
- Boaler, J. (2016). *Mathematical mindsets: Unleashing students' potential through creative math, inspiring messages, and innovative teaching*. San Francisco, CA: Josey-Bass.
- Cai, J., & Lester, F. (2010). Why is teaching with problem solving important to student learning? *Research Brief*, 1-6. Retrieved from www.nctm.org
- Dougherty, C. & Rutherford, J. (2009). The NCEA core practice framework: an organizational guide to sustained school improvement. Retrieved from <http://www.act.org/content/dam/act/unsecured/documents/NCEA-Organizing-Guide.pdf>
- Flynn, M. (2017). From answer-getters to problem solvers. *Educational Leadership*, 75(2), 26-31.
- House Bill 5 and high school graduation requirements. (2014). Retrieved from <http://www.tasnet.org/cms/lib07/TX01923126/Centricity/Domain/175/external/tea-ppt.pdf>
- Lester, F. K. (1994). Musings about mathematical problem-solving research: 1970-1994. *Journal for Research in Mathematics Education*, 25, 660-675. Retrieved from www.researchgate.net/publication/308645660
- Maher, C. (2002). How students structure their own investigations and educate us: what we've learned from a fourteen year study. Retrieved from www.researchgate.net/publication/234571159
- Maher, C. (2011). The longitudinal study. Retrieved from <https://www.researchgate.net/publication/225960437>
- Mueller, M., Yankelewitz, D., & Maher, C. (2014). Teachers promoting student mathematical reasoning. *Investigations in Mathematics Learning*, 7(2), 1-20.
- National Council of Teachers of Mathematics (NCTM) (1989). *Curriculum and evaluation standards for school mathematics*. Reston, VA
- National Council of Teachers of Mathematics (NCTM) (1991). *Professional standards for teaching mathematics*. Reston, VA
- No Child Left Behind Act of 2001. (2001).
- Nord, G., Malm, E. J., & Nord, J. (2002). Counting pizzas: a discovery lesson using combinatorics. *Mathematics Teacher*, 95(1), 8-14. Retrieved from www.nctm.org
- P21 Common core toolkit. (2011). Retrieved from www.p21.org
- Schoenfeld, A. H. (1992). Learning to think mathematically: Problem solving, metacognition, and sense-making in mathematics. In D. Grouws (Ed.), *Handbook for Research on Mathematics Teaching and Learning*, 334-370. New York: MacMillan.
- Scriven, M., & Paul, R. (n.d.). *Defining critical thinking*. Retrieved from <http://www.criticalthinking.org/pages/defining-critical-thinking/410>
- Seeley, C. (2017). Turning teaching upside down. *Educational Leadership*, 75(2), 32-36.
- Smith, M. S., & Stein, M. K. (1998). Selecting and creating mathematical tasks: from research to practice. *Mathematics Teaching in the Middle School*, 3(5), 344-350.
- Standards in your state. (2016). Retrieved from <http://www.corestandards.org/standards-in-your-state/>

INSTRUMENT DEVELOPMENT: FACULTY CARING SURVEY

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Abstract

This study focused on the development of an instrument to measure preservice teachers' perceptions of faculty behaviors that convey caring due to the unavailability of such measure and its significant link to student retention and success. A mixed method approach was used to develop a valid and reliable instrument. Qualitative data analysis, item discrimination coefficients, rank ordering of the items in terms of importance, internal consistency and reliability, and exploratory factor analysis provided evidence for a single subscale: Faculty Caring. Results identify preservice teachers' perceptions of the most important caring behaviors instructors demonstrate. Instructors' self-understanding of their caring encounters with students may provide a means for self-improvement in order to influence student success and a lens to promote positive interpersonal relationships with all students. Development of our instrument has the potential to facilitate informal or formal assessment of teacher educators' caring disposition at different higher education institutions nationally.

Keywords: caring, preservice teachers, teacher educators, teaching, instrument development

Caring is a topic significantly linked to student success (Garza & Huerta, 2014; Muñoz, Scoskie, & French, 2013; Walker & Gleaves, 2016) and a necessary aspect of preservice teachers' preparation (Hallam, 2009). While researchers (Ford & Ford, 1989) have acknowledged that caring is a disposition instructors should convey towards their students, O'Brien (2010) affirmed, "we can and must attend solicitously to caring in our work with college students in order to maximize student learning" (p. 114). However, committee responsibilities, large classes, research, personal problems, or health and physically related issues, may interfere with our degree of caring and the importance of cultivating a welcoming environment. Although teacher educators are often faced with students who lack the necessary dispositions to be successful in the classroom (Wasicsko, n.d.), "the act of caring and being cared for forms a loop which provides needed support to enhance student growth" (Collier, 2005, p. 358). Appropriate ways to care for others could be modeled by teacher educators (Liston & Zeichner, 1987), yet what makes caring a challenging notion is the difference of perspectives regarding this complex notion (Scarlett, Ponte, & Singh, 2009). For example, some educators might view caring as expecting students "to act or behave in certain ways if they are to be considered as thinking or acting appropriately in relation to the attempts and enactments of care" (Sinha & Thornburg, 2012, p. 28). On the other hand, students may perceive those actions as unimportant or inadequate and their response to expectations contradicts what is expected by the instructor. Given this interpretive dissonance, educators might want to reflect on their own communication and interaction with students to authentically assess the degree of caring that may influence student learning and success.

As Scarlett, Ponte, and Singh (2009) affirmed, "showing care comes in many forms, and some of these forms, may at first, appear to be the opposite of showing care" (p. 61). Therefore, what behavior should a teacher educator exhibit to be perceived as caring by students, especially when the instructor must meet the needs of unique individuals who share varied beliefs and experiences? Because of the limited research of aspiring teachers'

perceptions of caring, researchers have suggested the need to explore university students' conceptions of caring (Eisenbach, 2016; Ng et al., 2012). Specifically, Ng et al. (2012) recommended further examination of university students' perceptions of caring. In response to their call for more studies on conceptions of teacher caring, the purpose of our study was to develop an instrument to measure undergraduate and graduate preservice teachers' perceptions of instructor behaviors that demonstrated caring. Identifying teacher candidates' perceptions of caring behaviors is important for several reasons. First, positive perceptions of instructor caring have been linked to student retention and success (Crosling, Heagney, & Thomas, 2009). Next, if teacher educators want to prepare caring teachers (Ng et al., 2012), it is important for teacher candidates to also experience behaviors that reflect caring attributes. "By modeling 'care' on a consistent basis, students come to know in a real sense what the influence of caring really means" (Collier, 2005, p. 354). Finally, instructors' self-understanding of their caring encounters with students may provide a means for self-improvement in order to influence student success (Collier, 2005) and a lens to promote positive interpersonal relationships with all students. Development of our instrument could facilitate an informal or formal assessment of teacher educators' caring dispositions at different higher education institutions nationally.

Conceptual Framework

The Ethos of Caring

This study is guided by a framework on caring in higher education. Research has recognized caring as a hallmark of teaching and learning, and scholars have continued to express their conceptual views on this complex notion. While researchers agree that caring is key in establishing a relationship, their views differ (Blustein 1991; Mayeroff 1971; Noddings 2005; Pang 2005). Whereas Noddings and Pang view caring as a reciprocal act, Mayeroff and Blustein consider an individual's responsibility and professional role as influences on the extent of a caring act. According to Noddings (1984, 2005), caring is reciprocal and recognizes the necessity of gaining the trust of students as a critical aspect of the relationship. This trust, once established, supports educators' ability to develop meaningful, genuine caring relationships with students, especially when they take a genuine interest in getting to know their students beyond the academic setting (Pang, 2005). Additionally, Noddings asserts that an ethic of caring must include modeling, dialogue, practice, and confirmation. For example, caring teachers interact positively with students, provide assistance with academic learning tasks, are available to provide assistance when needed, and show a personal interest in the student (Garza, 2009; Valverde, 2006). Being present for students also includes "practices that encourage acceptance, trust, inclusion, and openness," qualities conducive to the development of a caring relationship (O'Brien, 2010, p. 114).

Unlike Noddings (2005) who believed caring must be reciprocal in nature, Blustein (1991) recognized that a relationship consists of certain roles that may not include reciprocal behaviors. For example, a teacher-student relationship exists when the teacher is expected to care for students out of disposition and job responsibility, but the situation does not guarantee reciprocity. These relationships, determined by contextual circumstances and the reciprocity of the student, may vary in intensity. "Teachers must be able to communicate to their students that they do care about them in order for students to perceive them as caring" (Teven, 2007, p. 435). However, this may require the educator to focus on changing the self rather than trying to change how students, the cared for, respond in ways that reflect expected responses from being cared for (Sinha & Thornburg, 2012). As Garza and Huerta (2014, p.146) underpinned, "educators are charged with developing and aligning effective educational practices" with students' perceptions of caring to meet their immediate needs.

More recently, Hachey (2012) expressed that caring is a visible affective behavior complemented by positive interaction between two individuals. Similarly, Ng et al. (2012) extended this notion by defining caring as "the perception that faculty members are motivating, positive, friendly, attentive to students' needs and problems (personal, social, and intellectual), willing and able to provide advice and guidance, have [sic] good relationship with students, and demonstrate professional competence in teaching" (p. 94). Therefore, to care for people requires

an interest and action for their welfare, rather than just showing visible affection (Nieto, 2004). In other words, my espoused belief that I care for others is demonstrated through my genuine behavior and actions and not because I expect to get something in return.

Ways of Demonstrating Caring

Research has acknowledged caring as a critical disposition of effective teachers (Garza & Huerta, 2014; Katz, 2007; Lee & Ravizza, 2008; Liu & Meng, 2009) and the impact on student learning and retention. However, what also makes caring a challenging concept, is understanding how people are “differentially located in sociocultural worlds” (Gomez, Allen, & Clinton, 2004, p. 487) to respond appropriately and effectively. This differential location is likely to lead to different interpretations of what constitutes caring behaviors, but if trust is at the center of a caring relationship, the bond between student and teacher has the potential to influence teaching and learning (Kim & Schallert, 2011).

Although the link between adolescent students’ success and caring has been well documented in the literature, further empirical work to understand university teacher-preparation students’ perceptions of caring is needed. As de Guzman et al. (2008) emphasized, “maintaining personal interactions with students and creating a caring atmosphere is central to college teaching” (p. 498). Several empirical studies have examined university students’ perspectives of caring and the instructor–student relationship in the classroom. For example, Teven and McCroskey (1997) found a strong positive correlation between perceived caring and instructor appraisal and Thweatt and McCroskey (1998) found that the more attentive instructors were to students, the more they were perceived as trustworthy and caring. In a follow-up study, Teven (2007) found that appropriate behavior and interactions that conveyed caring positively influenced students’ perception of the instructor and subject matter. According to de Guzman et al. (2008), college teachers interacting frequently with students and fostering a caring environment is key to students’ positive classroom experiences. Similarly, Grantham, Robinson, and Chapman (2015) reported that faculty who initiated personal and academic contact with students were perceived as caring. Komarraju, Musulkin, and Bhattacharya (2010) further reported, “students who perceive their faculty members as being approachable, respectful, and available for frequent interactions outside the classroom are more likely to report being confident of their academic skills and being motivated, both intrinsically and extrinsically” (p. 339).

In addition to the studies that investigated undergraduate students’ perspectives about caring, others have focused on student teachers and university professors. For instance, Lee and Ravizza (2008) described four preservice physical education candidates’ perceptions of caring and discussed the factors that contributed to their perceptual lens. Findings indicated that caring can be demonstrated through pedagogical and relational aspects: attending to instruction, engaging all students in the learning process, providing feedback, fostering a sense of community, building a student-teacher relationship, regarding students as individuals, and being objective when interacting with students. This means that caring teachers are committed to their craft and can influence students’ behavior (Collier, 2005).

A significant body of research on caring has been illuminated through emotional (Chowdhry, 2014), relational (de Guzman et al., 2008; Kim & Schallert 2011; O’Keefe 2013), critical (Antrop-Gonzalez & De Jesus, 2006; Gonzalez & Ayala-Alcantar, 2008), culturally responsive (Gay, 2010), ethnic (Pizarro, 2005; Valverde, 2006), multicultural (Pang, 2005) and feminist (Noddings, 1984) lenses. Furthermore, research on caring has also examined behaviors and characteristics (Garza & Huerta, 2014; Gholami & Tirri, 2012; Teven & Gorham, 1998), facilitative instructional practices (Nieto, 2004), teaching the ethic of caring (Rabin, 2014), and moral practice (Gholami, 2011; Noddings, 2005). While caring perspectives of university students enrolled in general courses have been examined, research on preservice teachers’ conceptions about caring is limited. Therefore, the current study examines preservice teachers’ perceptions of instructor caring.

Methodological Considerations

We used a mixed methods approach, employing a sequential exploratory design (McMillan, 2012), because we wanted to create an instrument to measure preservice teachers' perceptions of instructor behaviors that convey caring. As Creswell (2003) points out, "this model is especially advantageous when a researcher is building a new instrument" (p. 216). In addition, mixed method "can help to explain, clarify, and extend results discovered through the use of only one research method" (Mertler, 2016, p. 257). Our quantitative data were used to inform the design of a valid caring measure as one way to examine caring and expand on the qualitative findings. Thus, we developed an instrument in two phases to identify behaviors preservice teachers perceived as caring. Purposeful sampling was used to collect qualitative data (Palinkas et al., 2015) while convenience sampling was used to collect quantitative data (McMillan, 2012).

Phase 1: Scale Development

The first phase of our scale development involved generating items to include in our instrument (DeVellis, 2003). Data for item development were obtained from student responses to an online open-ended survey. A purposeful sample of preservice graduate and undergraduate students who had not started student teaching received an email inviting them to respond to the survey approved by the university's institutional review board (IRB) and received no type of compensation for their participation. All students were enrolled in teacher preparation courses during the first summer session of an academic school year. The survey included the following open-ended statements about teacher caring: (a) Describe the different ways you show or would show your students that you care about them, (b) Describe the different ways your students might perceive you as uncaring, (c) Describe the different ways your professors seem caring toward you, and (d) Describe the different ways your professors seem uncaring toward you. These four questions guided aspiring teachers to think about what it means to care for and to be cared about, providing rich qualitative data to inform our instrument development.

Of the 1,604 possible respondents, 219 (31 males and 188 females) completed the survey. Demographics included African American (2%), Asian/Pacific Islander (5%), Hispanic/Latino (28%), Native American (1%), and White (70%).

The 219 responses to each of the four open-ended questions were analyzed using constant comparative analysis (Strauss & Corbin, 1998) to reduce concepts and to identify the properties and recurring themes that emerged. A trained research assistant analyzed the responses to the four questions and coded student comments during an initial reading and made notes as the data were interpreted. Positive and negative examples of student comments were coded to convey examples of caring and non-caring behavior. Next, using the notes generated by the research assistant, we independently analyzed the data for recurring patterns through constant comparative analysis (Strauss & Corbin, 1998). Comparing initial notes and new codes to generate an initial list of recurring statements allowed for a deeper analysis of the data. Independently, we analyzed positive and negative examples of caring behavior for emerging themes from the list of student comments. This process helped to ensure inter-coder agreement. To add credibility to our findings, we engaged in peer debriefing (McMillan, 2012) as we refined statements from the open-ended questions to reflect ways faculty members can demonstrate caring before finalizing a list of 26 items for a quantitative survey.

Pilot Test. The purpose of the pilot test (De Vellis, 2003) was to determine which of the 26 descriptive statements were most strongly perceived by preservice teachers as ways faculty may demonstrate caring. Beginning with a convenience sample of students enrolled in field-based teacher preparation classes during the spring 2014 semester, we randomly selected 119 students to participate in an online survey approved by the university's IRB. These preservice teachers were asked to rate the statements about caring using a 4-point Likert scale of Strongly Agree, Somewhat Agree, Somewhat Disagree, and Strongly Disagree, with no neutral response allowed. Responses were assigned values of 4, 3, 2, and 1, respectively.

Item Refinement. Using the pilot data, an exploratory factor analysis (EFA) was conducted to identify the set of latent constructs underlying the responses and to isolate the items aligned with those constructs (Pazos, Micari, & Light, 2010). “Factor analysis is an essential tool in scale development” (De Vellis, 2003, p. 137). We used parallel analysis (PA) to identify the number of factors to retain. PA is an ideal methodology for selecting the number of factors because it takes into consideration sampling error by generating random datasets of similar structure and then computing eigenvalues for the real data and for the randomly generated data (Van Overschelde & Garza, 2018). Factors are retained only when the eigenvalue for the real data is greater than the eigenvalue at the 95th percentile for the randomly generated datasets. PA has been shown to be one of the most reliable and conservative methods for isolating key factors for dimension reduction (Hayton, Allen, & Scarpello, 2004; Thompson & Daniel, 1996; Velicer, Eaton, & Fava, 2000). Using this methodology, the first three components were retained. A principal component analysis (PCA) with three fixed factors was then run with Promax rotation where missing values were excluded from the list. The three factors accounted for 79% of the total variance, with the individual variance percentages of 48.2%, 16.5%, and 14.2%, respectively. One item was removed at this stage because it did not load on any factor above 0.30 (Beaver et al., 2013). Each set of questions that loaded most strongly on a factor were then analyzed for internal reliability using Cronbach’s alpha. The alpha value was noted and any question that lowered the alpha by more than 0.005 was removed (Van Overschelde & Garza, 2018), one question at a time, and the Cronbach’s alpha rerun. The final alphas for the three factors were: 0.93, 0.94, and 0.89. This iterative process resulted in the removal of six additional questions. A total of 19 questions remained for use in Phase 2.

Phase 2: Scale Development

The purpose of this phase was to test the near-final scale with a sample of undergraduate and graduate preservice teachers. All preservice teachers enrolled in teacher preparation courses during the summer or fall semesters of 2017 received an email inviting them to participate in an online quantitative survey approved by the university’s IRB. The same response scale and item recoding (e.g., 4 = Strongly Agree) was used as during Phase 1.

Sample. Of the 789 preservice teachers emailed, 172 (22%) responded to the survey request. The demographic characteristics of the sample were similar to the demographics of the teacher preparation population. For example, the sample was 31% Latino/a, 58% White, 84% Female, and 49% early childhood through Grades 6 (EC-6), whereas the population in our teacher preparation program is 36% Latino/a, 53% White, 76% Female, and 40% EC-6, respectively. Table 1 provides demographic characteristics of the preservice teachers who completed the survey during Phase 2.

Table 1
Demographic Characteristics of Phase 2 Sample Participants (N = 172)

Characteristics	n	%
Ethnicity		
Black	9	5%
Hispanic/Latino/a	62	31%
Other	12	6%
White	114	58%
Gender		
Female	145	84%
Male	27	16%
Academic Levels		
Sophomore	12	7%
Junior	55	32%
Senior	81	47%
Graduate or Post-Baccalaureate	24	14%
Type of Certification		
Early Childhood – Grade 6	84	49%
Grades 4-8	15	9%
Secondary (e.g., Math, English)	47	27%
Special Education	14	8%
Other – All level (e.g., Art, Physical Education)	12	7%

Data Analysis and Results.

Table 2 shows the percentage of preservice teachers who strongly agreed the behavior reflected teacher caring in the classroom during Phase 2.

Table 2
Frequency Item Analysis of Perceived Caring Behaviors during Phase 2 (N = 172)

Item	Item #	n	Strongly Agree	%
Is willing to help me	14	164	155	95%
Is encouraging in class	22	164	152	93%
Is patient with me	9	170	152	89%
Ensures that I understand material in class	20	164	145	88%
Listens to me in class	6	170	150	88%
Is approachable	19	164	144	88%
Is enthusiastic about his/her teaching	11	164	143	87%
Is fair with me	17	164	139	85%
Is available during office hours	15	164	136	83%
Is open to questions in class	21	164	136	83%
Is prepared for class	13	164	135	82%
Provides constructive feedback on assignments	4	172	138	80%
Provides positive reinforcement	2	172	137	80%
Interacts personally with me in the classroom	3	172	132	77%
Is available for extra help when needed	16	164	125	76%
Respects my opinions	1	172	128	74%
Returns graded assignments in a timely manner	5	170	114	67%
Is flexible	18	164	101	62%

Item Refinement. Using the caring survey data from Phase 2, an EFA was again conducted to identify the set of latent constructs underlying the responses and to isolate the items aligned with those constructs. This second EFA was performed because six items had been removed during the EFA for the Pilot phase. We again used PA to identify the appropriate number of factors to retain and one factor was retained. A principal component analysis with one fixed factor was then run with Promax rotation where missing values were excluded from the list. One item was removed because it did not load on the factor above 0.30. The factor loadings are in Table 3. A principal component analysis with no factor restriction was run to determine the percentage of variance accounted for by this one factor; the variance was 79%. The Kaiser-Meyer-Olkin measure of sampling size adequacy was 0.76, indicating the sample size was sufficiently large.

The resulting 18 items were then analyzed for reliability using Cronbach's alpha. No item caused the alpha to decrease by more than 0.005. The final alpha was 0.85. Table 3 shows the factor loadings for each of the final items, with all loadings above 0.3.

Table 3

Pattern Matrix Factor Loadings of Perceived Caring Behaviors during Phase 2 (N = 172)

Item	Factor 1
Respects my opinions	0.485
Provides positive reinforcement	0.600
Interacts personally with me in the classroom	0.402
Provides constructive feedback on assignments	0.441
Returns graded assignments in a timely manner	0.452
Listens to me in class	0.508
Is patient with me	0.633
Is enthusiastic about his/her teaching	0.331
Is prepared for class	0.418
Is willing to help me	0.533
Is available during office hours	0.462
Is available for extra help when needed	0.540
Is fair with me	0.498
Is flexible	0.503
is approachable	0.523
Ensures that I understand material in class	0.711
Is open to questions in class	0.635
Is encouraging in class	0.580

Discussion

While previous research has discussed teacher caring from different perspectives, the purpose of our study was to develop an instrument to examine preservice teachers' perceptions of caring by university faculty – the Faculty Caring Survey (FCS – Appendix A). The development of the FCS involved several stages. The items used in the FCS were generated during Phase 1 by preservice teachers as examples of behaviors they believe showed that faculty members care for them and examples of behaviors they would use to show their students they were cared for by them. Therefore, the instrument has content validity (DeVellis, 2003).

After pilot and Phase 2 testing, we determined the FCS can be effectively summarized using a single factor that accounted for 79% of the variance. The single factor showed high internal consistency (0.85). The results of our study highlight the behaviors university preservice teachers perceive as ways a faculty member demonstrates caring.

Our study expands the discourse on student perceptions of teacher caring by including undergraduate and graduate preservice teachers' voices and identifying the critical nature of those conceptions. Our results, consistent with other studies, support the need for faculty to cultivate responsive relationships and an inclusive classroom environment, keys in helping students succeed at the university level (Cooper & Miness, 2014; Kim & Schallert, 2011; Komarraju et al., 2010; Teven & Gorham, 1998; Thayer & Bacon, 1996a). Results indicated that undergraduate and graduate preservice teachers perceived some behaviors as the most important aspects of a caring instructor. Two items, *Is willing to help me* and *Is in encouraging in class* were perceived by more than 90% of the participants as positive examples of caring. This indicates the need for faculty to validate student needs as a way to demonstrate caring (Ng et al., 2012). Thus, a caring instructor is someone who regards a student as an individual rather than another body in the classroom and is empathic when personal challenges emerge. Students perceive a caring instructor as an individual who provides scaffolding during instruction and conveys a genuine interest and enthusiasm during instruction.

Limitations

Our study is limited by a sample from one large public university with data gathered from predominantly White undergraduate female preservice teachers in one educator preparation program. Although the teaching field consists of largely White females (Ingersoll & May, 2011), including a more diverse ethnic distribution might provide additional behaviors that were not mentioned initially. In addition, the results are dependent on the preservice teachers' willingness to complete the online surveys. "Volunteer samples may respond differently than non-volunteers" because of their motivation to participate (McMillan, 2012, p. 110). Participants in other educator preparation programs and geographical areas might encounter a different set of student characteristics, circumstances, and preparation experiences that may influence their perceptions of caring by their instructors. Also, since our instrument was informed by preservice teachers, perhaps the list of items might have been more extensive if practicing teachers had been surveyed during the qualitative phase of the instrument development. Being a classroom teacher provides different experiences than learning about teaching and what it means to care for students. Although our findings add to the research on caring by illuminating preservice teachers' perceptions of teacher behaviors that convey caring, our interpretation of the findings are based on classroom experiences of undergraduate and graduate teacher candidates' learning to become teachers. Therefore, caution should be taken when generalizing the results from this study to teacher educators and undergraduate and graduate preservice teachers in other preparation programs. Because instructors and preservice teachers are not homogeneous, caution must be exercised not to generalize these findings as absolute ways that university instructors demonstrate care for students.

Conclusions and Implications

In spite of the limitations of this study, the results of our study expand on research examining students' perceptions of caring (Ng et al., 2012) and support the need to cultivate positive caring experiences for students. Instructor caring, in concert with other research (Crosling et al., 2009), has the potential to affect student retention and success. Our FCS merits consideration as an important topic for teacher educators to consider, especially when they teach a diverse population of students. Encouraging faculty members to examine their own notions of caring merits further research consideration. As Collier (2005) reported, student success may also be contingent on faculty understanding of how to adequately care for their students.

Our results may be used as a springboard for dialogue among university faculty to consider the dynamics of caring for diverse students and assessing their beliefs with that of students' perceptions. As Gomez et al. (2004, p. 487) suggested, "teacher education at-large also should take up care as an important topic – a topic which asks students to examine not only what their ideals of care are, but also could support them in examining how their ideals have developed from their own positions, often privileged ones related to class, race, sexual orientation ability, and language background."

Other teacher educators and practitioners such as, mentor teachers, administrators, district supervisors, and university supervisors may find merit in these results because they provide a description of what current aspiring teachers perceive as ways to be cared about. The notion of preservice teachers' perceptions of caring behaviors also deserves further examination to determine whether these behaviors are unique to our setting or representative of other aspiring teacher candidates in different university settings. Whereas most of our participants were White, a more diverse sample could perceive different behaviors as more important aspects of caring. In addition, comparing perceptions of undergraduate and graduate students in education to non-education students might reveal some interesting results, especially because caring is highlighted in much of the education pedagogy.

According to McNamee, Mercurio, and Peloso (2007), "caring is a deliberate moral and intellectual stance rather than simply feeling" because it involves action and a complementary behavior (p. 278). Our FCS can be used as a formal or informal assessment of faculty's caring disposition in other educator preparation programs. For example, an instructor can involve his/her students in assessing the degree of caring via our instrument and use data to reflect on the results and perhaps become a more culturally responsive professional. As a result, fostering a sense of belonging and better relationships with students, motivating them to attend class more, and creating positive schooling experiences (Garza & Huerta, 2014) may be an outcome of thoughtfully integrating our results with one's practice. Being consciously aware of how students respond to faculty behavior and actions can be a way for educators to reflect on their own verbal and nonverbal interaction with students to authentically assess the quality and degree of caring. In doing so, "teacher educators may in turn create teachers who care more about the effects of their teaching practices on students" (Dunn & Rakes, 2010, p. 520). The challenge is to be able to respond to students in ways that they perceive as meaningful and appropriate rather than what is easier for us as faculty members.

References

- Antrop-Gonzalez, R., & De Jesus, A. (2006). Toward a theory of critical care in urban small school reform: Examining structures and pedagogies of caring in two Latino community-based schools. *International Journal of Qualitative Studies in Education*, 19(4), 409-433.
- Beaver, A. S., Lounsbury, J. W., Richards, J. K., Huck, S. W., Skolits, G. J., & Esquivel, S. L. (2013). Practical considerations for using exploratory factor analysis in educational research. *Practical Assessment, Research & Evaluation*, 18(6), 1-13.
- Blustein, J. (1991). *Caring and commitment: Taking the personal point of view*. New York, NY: Oxford University Press.
- Chowdhry, S. (2014). The caring performance and the 'blooming student': Exploring the emotional labour of further education lecturers in Scotland. *Journal of Vocational Education & Training*, 66(4), 554-571.
- Collier, M. (2005). An ethic of caring: The fuel for high teacher efficacy. *The Urban Review*, 37(4), 351-359.
- Cooper, K. S., & Miness, A. (2014). The co-creation of caring student-teacher relationships: Does teacher understanding matter? *The High School Journal*, 97(4), 264-290.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Crosling, G., Heagney, M., & Thomas, L. (2009). Improving student retention in higher education: Improving teaching and learning. *Australian Universities' Review*, 51(2), 9-18.
- de Guzman, A. B., Uy, M. M., Siy, E. Y., Torres, R. K. C., Tancioco, J. B. F., & Hernandez, J. R. (2008). From teaching from the heart to teaching with a heart: Segmenting Filipino college students' views of their teachers' caring behavior and their orientations as cared-for individuals. *Asia Pacific Education Review*, 9(4), 487-502.
- DeVellis, R. F. (2003). *Scale development: Theory and applications* (2nd ed.). Thousand Oaks, CA: Sage.
- Dunn, K. E., & Rakes, G. C. (2010). Producing caring qualified teachers: An exploration of the influence of preservice teacher concerns on learner-centeredness. *Teaching and Teacher Education*, 26(3), 516-521.
- Eisenbach, B. B. (2016). A conversation of care: Unpacking and engaging preservice teacher ideologies. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*. 89(6), 223-227.
- Ford, J., & Ford, S. S. (1989). A caring attitude and academic advising. *NACADA Journal*, 9(2), 43-48.
- Garza, R. (2009). Latino and white high school students' perceptions of caring behaviors: Are we culturally responsive to our students? *Urban Education*, 44(3), 297-321.
- Garza, R., & Huerta, M. E. S. (2014). Latino high school students' perceptions of caring: Keys to success. *Journal of Latinos in Education*, 13(2), 134-151.
- Gay, G. (2010). *Culturally responsive teaching* (2nd ed.). New York, NY: Teachers College Press.
- Gholami, K. (2011). Moral care and caring pedagogy: Two dimensions of teachers' praxis. *Pedagogy, Culture & Society*, 19(1), 133-151.
- Gholami, K. & Tirri, K. (2012). Caring teaching as a moral practice: An exploratory study on perceived dimensions of caring teaching. *Education Research International*, 2012(954274), 1-8.
- Gomez, M. L., Allen, A., & Clinton, K. (2004). Cultural models of care in teaching: A case study of one preservice secondary teacher. *Teaching and Teacher Education*, 20(5), 473-488.
- Gonzalez, R., & Ayala-Alcantar, C. U. (2008). Critical caring: Dispelling Latino stereotypes among preservice teachers. *Journal of Latinos and Education*, 7(2), 129-143.
- Grantham, A., Robinson, E. E., & Chapman, D. (2015). "That truly meant a lot to me": A qualitative examination of meaningful faculty-student interactions. *College Teaching*, 63(3), 125-132.
- Hachey, A. C. (2012). Care from a cognitive perspective. *Knowledge Quest*, 40(4), 39-44.
- Hallam, M. K. (2009). Why teacher dispositions are a crucial aspect of student success. *The Language Educator*. Retrieved from http://www.actfl.org/files/TLE_Jan09_Article.pdf

- Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods*, 7(2), 191-205.
- Ingersoll, R., & May, H. (2011). *Recruitment, retention and the minority teacher shortage*. Philadelphia, PA: Consortium of Policy Research in Education. Retrieved from <http://www.cpre.org/recruitment-retention-and-minority-teacher-shortage>
- Katz, M. S. (2007). Competing conceptions of caring and teaching ethics to prospective teachers. *Philosophy of Education Yearbook*, 2007, 128-135.
- Kim, M., & Schallert, D. L. (2011). Building caring relationships between a teacher and students in a teacher preparation program word-by-word, moment-by-moment. *Teaching and Teacher Education*, 27(7), 1059-1067.
- Komaraju, M., Musulkin, S., & Bhattacharya, G. (2010). Role of student-faculty interactions in developing college students' academic self-concept, motivation, and achievement. *Journal of College Student Development*, 51(3), 332-342.
- Lee, O., & Ravizza, D. (2008). Physical education preservice teachers' conception of caring. *Education*, 128(3), 460-742,
- Liston, D. P., & Zeichner, K. M. (1987). Reflective teacher education and moral deliberation. *Journal of Teacher Education*, 38(6), 2-8.
- Liu, S., & Meng, L. (2009). Perceptions of teachers, students and parents of the characteristics of good teachers: A cross-cultural comparison of China and the United States. *Educational Assessment, Evaluation and Accountability*, 21(4), 313-328.
- Mayeroff, M. (1971). *On caring*. New York, NY: Harper & Row, Publishers.
- McMillan, J. H. (2012). *Educational research: Fundamentals for the consumer* (6th ed.). Boston, MA: Pearson.
- McNamee, A., Mercurio, M., & Peloso, J. M. (2007). Who cares about caring in early childhood teacher education programs? *Journal of Early Childhood Teacher Education*, 28(3), 277-288.
- Mertler, C. A. (2016). *Introduction to educational research*. Thousand Oaks, CA: Sage.
- Muñoz, M. A., Scoskie, J. R., & French, D. L. (2013). Investigating the "black box" of effective teaching: The relationship between teachers' perception and student achievement in a large urban district. *Educational Assessment, Evaluation and Accountability*, 25(3), 205-230.
- Ng, P., Su, X. S., Chan, V., Leung, H., Cheung, W., & Tsun, A. (2012). The reliability and validity of a campus caring instrument developed for undergraduate students in Hong Kong. *Measurement and Evaluation in Counseling and Development*, 46(2), 80-100.
- Nieto, S. (2004). *Affirming diversity: The sociopolitical context of multicultural education* (4th ed.). New York, NY: Allyn and Bacon.
- Noddings, N. (1984). *Caring: A feminine approach to ethics and moral education*. Berkeley, CA: University of California Press.
- Noddings, N. (2005). *The challenge of care in schools: An alternative approach to education* (2nd ed.). New York, NY: Teachers College Press.
- O'Brien, L. M. (2010). Points of departure. *Teaching in Higher Education*, 15(1), 109-115.
- O'Keefe, P. (2013). A sense of belonging: Improving student retention. *College Student Journal*, 47(4), 605-613.
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services*, 42(5), 533-544.
- Pang, V. O. (2005). *Multicultural education: A caring-centered reflective approach*. New York, NY: McGraw Hill.
- Pazos, P., Micari, M., & Light, G. (2010). Developing an instrument to characterize peer-led groups in collaborative learning environments: Assessing problem-solving approach and group interaction. *Assessment & Evaluation in Higher Education*, 35(2), 191-208.
- Pizarro, M. (2005). *Chicanas and Chicanos in schools*. Austin, TX: The University of Texas Press.

- Rabin, C. (2014). Don't throw the rocks!: Cultivating care with a pedagogy called rocks-in-the-basket. *Journal of Research in Childhood Education, 28*(2), 145-161.
- Scarlett, W. G., Ponte, C. I., & Singh, J. P. (2009). *Approaches to behavior and classroom management*. Thousand Oaks, CA: Sage.
- Sinha, S., & Thornburg, D. (2012). The caring teacher-student relationship in public education. *Encounter: Education for Meaning and Social Justice, 25*(1), 23-30.
- Strauss, A. & Corbin, J. (1998). *Basics of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Teven, J. J. (2007). Teacher caring and classroom behavior: Relationships with student affect and perceptions of teacher competence and trustworthiness. *Communication Quarterly, 55*(4), 433-450.
- Teven, J. J., & McCroskey, J. C. (1997). The relationship of perceived teacher caring with student learning and teacher evaluation. *Communication Education, 46*(1), 1-9.
- Teven, J. J., & Gorham, J. (1998). A qualitative analysis of low-inference student perceptions of teacher caring and non-caring behaviors within the college classroom. *Communication Research Reports, 15*(3), 288-298.
- Thayer-Bacon, B. J., & Bacon, C. S. (1996^a). Caring professors. *The Journal of Education, 45*(4), 255-269.
- Thompson, B., & Daniel, L. G. (1996). Factor analytic evidence for the construct validity of scores: A historical overview and some guidelines. *Educational and Psychological Measurement, 56*, 197-208.
- Thweatt, K. S., & McCroskey, J. C. (1998). The impact of teacher immediacy and misbehaviors on teacher credibility. *Communication Education, 47*, 348-358.
- Valverde, L. A. (2006). *Creating new schools for Mexican Latinos*. MD: Rowman & Littlefield Publishers.
- Van Overschelde, J. P., & Garza, R. (2018). Understanding the under-representation of Hispanic students in teacher preparation. *Journal of Latinos and Education*.
- Velicer, W. F., Eaton, C. A., & Fava, J. L. (2000). Construct explication through factor or component analysis: A review and evaluation of alternative procedures for determining the number of factors or components. In R. D. Goffin & E. Helmes (Eds.), *Problems and solutions in human assessment: Honoring Douglas N. Jackson at seventy* (pp. 41-71). Boston: Kluwer Academic Publishers.
- Walker, C., & Gleaves, A. (2016). Constructing the caring higher education teacher: A theoretical framework. *Teaching and Teacher Education, 54*, 65-76.
- Wasicsko, M. M. (n.d). *The national network for the study of educator dispositions*. College of Education, Eastern Kentucky University.

Appendix A
Faculty Caring Survey

Research has illuminated the importance of caring in the classroom, but it is unclear if teachers perceive caring in the same way that students do. Therefore, we would like to know the degree to which the following teacher behaviors are ways caring might be demonstrated in the classroom. Please volunteer to complete this anonymous survey.

Please indicate the degree to which you agree that the behaviors described below represent caring.

A	B	C	D
Strongly agree	somewhat agree	somewhat disagree	strongly disagree

1. Respects my opinions.
2. Provides positive reinforcement.
3. Interacts personally with me in the classroom.
4. Provides constructive feedback on assignments.
5. Returns graded assignments in a timely manner.
6. Listens to me in class
7. Is patient with me.
8. Is enthusiastic about his/her teaching.
9. Is prepared for class.
10. Is willing to help me
11. Is available during office hours.
12. Is available for extra help when needed.
13. Is fair with me.
14. Is flexible.
15. Is approachable
16. Ensures that I understand material in class.
17. Is open to questions in class.
18. Is encouraging in class.

THE CARE AND FEEDING OF COLLEAGUES

Rebecca Ratliff Fredrickson

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Abstract

In restaurants that serve lobster, there is never a lid on the tank. This is due to the simple idea that the other lobsters in the tank will not allow them to escape. As one lobster is starting to become successful, the other lobsters will reach up and pull them back down (Foote, 2012). In academia, faculty are often regarded in only how they produce (Huenneke, Stearns, Martinez, & Laurila, 2017) including the amount of grant money they bring into the university, number of publications, service on high level committees, or student evaluations. This can create an atmosphere of competition for faculty instead of an atmosphere of collaboration thus there is a deterioration within the academic climate for faculty (Teichler, Arimoto, & Cummins, 2013) and so the Lobster Syndrome continues and flourishes through this atmosphere of competition. This article examines the aspects of what could create this atmosphere of collaboration.

Keywords: Colleagues, new faculty induction/mentoring

Higher education has become a place where the Lobster Syndrome has been not only allowed to run rampant but is often encouraged. In restaurants that serve lobster, there is never a lid on the tank. This is due to the simple idea that the other lobsters in the tank will not allow them to escape. As one lobster is starting to become successful, the other lobsters will reach up and pull them back down (Foote, 2012). In academia, faculty are often regarded in only how they produce (Huenneke et al., 2017). This production includes the amount of grant money they bring into the university, how many publications produced, service on high level committees, or student evaluations. There is an additional demand for growth of the university, and the applicability of research (Mudrak et al., 2018; Bentley, Coates, Dobson, Goedegebuer, & Meek, 2013). This can create an atmosphere of competition for faculty instead of an atmosphere of collaboration leading to a deterioration within the academic climate for faculty (Teichler et al., 2013). Thus, the Lobster Syndrome continues and flourishes through this atmosphere of competition.

This article was inspired by the book *The Care and Feeding of a Teacher* by Brenda Preuss. She states that she published this book because, "I want teachers to read this book and feel validated, loved on, and empowered. I want administrators to read this book and say, 'Oh, wow! I forgot what it was like to be a teacher'" (2017, p. 1). There are a great many articles and books about teachers needing to take care of one another, to mentor and coach novice faculty, to support one another, and even a website where teachers pay one another for lessons and materials. There is very little written on what happens to novice faculty when they start teaching in a university setting. Academia is more than just teaching at a higher level. There are so many other facets to be an effective faculty member at today's universities. In a book chapter by Fredrickson, McMahan, and Hansen-Thomas (2017), the expectations for new faculty are addressed.

When entering into academia, new faculty members are introduced to the academic triumvirate: scholarship, teaching, and service. The expectation of junior faculty is often to be ultra-productive in all three aspects from day one; quality and quantity are expected in all areas. (p. 123)

Such expectations certainly imply that junior faculty need support and guidance to meet with success. The discussion below will examine conditions needed to create an atmosphere of collaboration instead of competition. Such aspects include mentoring, leadership, and an “ethic of . . .” lens.

Mentoring

In academia, it has become more difficult for novice faculty to find mentors within the ranks of seasoned faculty willing to coach in all aspects of academia; teaching, scholarship, and service (Carmel & Paul, 2015). Faculty cite numerous reasons for this lack of mentoring in the academy. Some seasoned faculty indicate they do not feel qualified to serve as mentors due to the lack of mentoring they received, the pressures of publication and scholarship (Pololi & Knight, 2005) and simply not having enough time to devote to a junior faculty member (Ehrich et al., 2004).

The Conference Board (2013) shared the importance of mentoring in organizations outside of academia. Organizations with mentoring programs keep good employees engaged with the organization. Therefore, new initiatives find support more easily and building a climate and culture reflective of organizational norms and values becomes systemic. Academia has not caught up with outside organizations in this regard. All aspects of mentoring in organizations could be of benefit at the university level. Keeping great faculty and keeping them engaged with the university would be of tremendous benefit. Additionally, with the dynamic atmosphere within higher education, mentoring could help to support these changes. Finally, one of the reasons most cited by faculty for leaving or staying within the university is the climate and culture of the university (Flaherty, 2016). By building and promoting high quality mentoring programs at the university, the climate and culture within academia could be enhanced. It should be noted, however, that most of the programmatic aspects are controlled by the leadership of the university. In the following section, aspects of leadership within academia will be addressed.

Leadership

Often the spirit of collaboration or competition existing in higher education has its origin within the offices of its leadership (Leisyte, 2016). This is due to immense pressure put on administration to raise the scholarship profile, financial profile, and the reputation of the university (Humphreys, 2013). There is a demand for universities to create a more highly educated populace while at the same time, “. . . maintaining quality and navigating changes in technology, funding patterns, accountability frameworks, and the diversity of our student bodies, we urgently need more effective and widespread collaborative leadership” (Humphreys, 2013, pp. 1-2). Humphreys (2013) states three ways collaborative leadership can bring about change within the university as it: (a) assists in sharing the mission/message to the public (including policy makers, families, and the media, to secure the necessary funding and help with regulatory support); (b) becomes the quality and maintenance of the operations of the university; (c) educates a more diverse population to meet the demands of the workforce in the twenty-first century. Improving collaboration in academia has also shown to improve student retention and success in higher education. Burns, Crow, and Becker (2015) stated,

In the often-contentious discussions about the future of U.S. higher education, one idea garners wide agreement: our institutions need to innovate. Since collaboration is the driving force for most innovation, it follows that developing a successful model for collaboration innovation -- for innovating together -- is the most sorely needed disruption in higher education. (p. 10)

There are many things that a university leader can do to improve the collaborative efforts at the institution. Loeche (2018) lists three ways that higher education leadership can create a more collaborative environment. Leaders should: (a) improve both their financial knowledge and technical training, (b) find incentives to drive outcomes, and (c) share institutional knowledge. This includes not only financial support, but encouragement for collaborative activities such as interdepartmental meetings, multidisciplinary scholarship endeavors, and attending conferences and seminars outside prescriptive fields.

University leadership should also empower faculty to serve as collaborative leaders (White, 2017). According to White (2017), steps to develop faculty leadership roles include:

- Engage faculty in roles that impact or reflect their academic responsibilities.
- Create communities of practice inclusive of faculty across campus who serve in leadership roles.
- Provide support and feedback for faculty leaders as they grow into their roles.
- Recognize faculty leaders in a high-profile manner.
- Help mentored faculty recognize, recruit, mentor, and support new faculty leaders.

There is a great amount written about creating teacher leaders within schools; however, there is less written that targets faculty leadership. As faculty are the “front lines” within a university in dealing with students, core academic values and democratic beliefs that underpin higher education, faculty are integral to the success of the university. Therefore, it is important for faculty leadership at the university to be effective and reflect the institution’s core values and beliefs. Even with all of this, “. . . few institutions offer effective support in developing faculty leaders” (Kiel, 2015, p. 8).

Ethic of . . .

The discussion of ethics and ethical dilemmas dates back to the days of Plato and Aristotle. Ethics as a system of moral principles was viewed as a decision-making guide by providing a framework for values and rules. Within education, ethics is often viewed as a theoretical standpoint rather than an action.

From an academic search using the term, “ethic of”, results focused on multiple effective and imperative leadership qualities emerged. Fostering such character traits within the university could assist in building a collaborative environment among faculty and academic leadership. Shapiro and Stefkovich (2018) examine the concept of ethic through four different lenses that could be used within the educational setting. These include ethic of care, ethic of justice, ethic of critique, and ethic of profession.

The ethic of care. The ethic of care. Based on the work of Nel Noddings, the ethic of care encourages educators to guide students not only academically, but emotionally and morally as well (Shapiro & Stefkovich, 2018). The students are the main focus of endeavor however, this is easily translated to the university setting. Translated to faculty in a university setting, the ethic of care could be used to create an atmosphere of collegiality among faculty through an emphasis on emotional and moral teaching, scholarship, and service rather than simply relying on a continuance off the status quo. This ethical lens can create relational values in faculty that include a feeling of belonging, trust, value, and self-efficacy; thus, creating a spirit of collaboration within the university.

The ethic of justice. Constructed on the ideals of a democratic society, the ethic of justice is defined by Strike (1991) as “a commitment to human freedom. . . [with] procedures for making decisions that respect the equal sovereignty of people” (p. 415). This can be at an individual or group level (Shapiro & Stefkovich, 2018). Often this is looked upon as what is best for society instead of the individual. Using this lens of ethic of justice could help build a climate of collegiality and collaboration at the university by giving faculty opportunities to contribute to the good of the whole. This would require decision makers to break down educational silos so consideration of what is good for the university is recognized (in some instances) over the good of the college, department, program, or individual faculty.

The ethic of critique. Grounded in critical theory, the ethic of critique examines ethics and morals through the lens of social justice. It examines factors that impact inequities and power based on group or individual diversities (Shapiro & Stefkovich 2018). These include race, ethnicity, language, gender, religion, and social class. At the university level, using the lens of critique would create an ambience of collaboration among faculty as it would encourage cross collaboration of diverse groups of individuals. “Such a process should lead to the development of options related to important concepts such as oppression, power, privilege, authority, voice,

language, and empowerment” (Shapiro & Stefkovich, 2005, p. 16). These discussions could open up lines of discourse across campuses.

The ethic of profession. This is the newest of the ethics put forth by Shapiro and Stefkovich (2005). They consolidated the ethic of care, justice, and critique to create the ethic of profession. This can be built by leadership and professional organizations by using the multiple lenses of ethics to create their own professional ethical and moral framework. At the university level, this ethic of profession could take on a value and merit that could gain significance with all university stakeholders. By engaging all stakeholders in this collective belief structure through the lens of profession, it could build collaboration within the university.

Conclusions

In the above discussion, aspects of creating an atmosphere of collaboration are addressed however; what happens to continue to create this? There is little written about maintaining this in a colleague-to-colleague manner. Some suggestions from the literature on creating a collaborative environment include:

- Measure, share, and celebrate collaborative success (Keast & Charles, 2018).
- Develop shared vision and goals of the organization and the collaborative work (Caskey & Carpenter, 2014).
- Create spaces that can serve as interdisciplinary research and meeting space (Adams, 2015).
- Develop a non-judgemental atmosphere to build and foster creativity (Field, 2012).
- Serve as a campus organizational leader, thus giving you access to different groups and stakeholders within the campus (Altizer, Harris, & Shartar, 2015).
- Expand discourse across campus to embrace all stakeholders (Caskey & Carpenter, 2014).
- Reward both based on individual accomplishments and efforts and those of the group (Field, 2012).
- Keep a toxic nature from entering into collaborations (Keast & Charles, 2018).
- Work in different settings than just your office. Consider going to the library, dining hall, student union, or coffee house on campus to meet different people from your campus (Altizer, Harris, & Shartar, 2015).
- Communication is important in gaining the trust of the collective. (Field, 2012; Baldwin & Chang, 2007).
- Invest in relationships with one another (Keast & Charles, 2018; Adams, 2015; Caskey & Carpenter, 2014; Field, 2012).
- Do not just dismiss conflict, expect conflict, and reflect upon the resolution (Caskey & Carpenter, 2014).

The implementation of these strategies can help to create a spirit of collegiality and collaboration on university campuses which must be modeled throughout educator preparation courses as we seek to show preservice teachers the importance of collaboration and care.

Although a great deal of the information provided is regarding new faculty members, it is important to address the needs of seasoned faculty members. As the university landscape continues to change and evolve, more demands are being placed on faculty to perform at higher and higher levels. This includes larger teaching loads, scholarship and publication demands, service expectations, and grant writing to provide funding at the university. It is more imperative than ever that we take the time needed to create a spirit of collaboration in academia and let go the constant competition demands and lobster mentality. It is time to provide the care and feeding of our colleagues.

References

- Adams, A. (2015). Building collaboration. Retrieved from <https://news.stanford.edu/features/2015/clark/>
- Altizer, A., Harris, S., & Shartar, S. (2015). 15 steps to building collaborative relationships on campus. Retrieved from https://www.campusafety.com/university/15_steps_to_building_collaborative_relationships_on_campus/
- Baldwin, R. G., & Chang, D. A. (2007). Collaborating to learn, learning to collaborate. *Peer Review*, 9(4), 26-30. Retrieved from https://www.aacu.org/sites/default/files/files/peerreview/PRFA07_Web.pdf
- Bentley, P. J., Coates, H., Dobson, I. R., Goedegebuure, L., & Meek, V. L. (Eds.). (2013). Introduction: Satisfaction around the world? In *Job satisfaction around the academic world* (pp. 1–11). Dordrecht: Springer Publishing.
- Burns, B., Crow, M., & Becker, M. (2015). Innovating together: Collaboration as a driving force to improve student success. Retrieved from <https://er.educause.edu/articles/2015/3/innovating-together-collaboration-as-a-driving-force-to-improve-student-success>
- Carmel, R. G., & Paul, M. W. (2015). Mentoring and coaching in academia: Reflections on a mentoring/coaching relationship. *Policy Futures in Education*, 13(4), 479-491.
- Caskey, M. M., & Carpenter, J. (2014). Building teacher collaboration school-wide. Retrieved from <https://www.amle.org/BrowsebyTopic/WhatsNew/WNDet/TabId/270/ArtMID/888/ArticleID/446/Building-Teacher-Collaboration-School-wide.aspx>
- Conference Board. (2013). The coaching and mentoring academy. Retrieved from: <http://www.conference-board.org/coachingacademy>
- Ehrich, L.C., Hansford, B., & Tennent, L. (2004). Formal mentoring programs in education and other professions: A review of literature. *Educational Administration Quarterly*, 40(4), 518-540.
- Field, A. (2012). 6 ways to foster collaboration in your workplace. Retrieved from: <https://www.americanexpress.com/us/small-business/openforum/articles/fostering-collaboration/>
- Flaherty, C. (2016). Why they stay and why they go. Retrieved from: <https://www.insidehighered.com/news/2016/03/14/new-survey-effort-seeks-uncover-real-reasons-why-faculty-members-leave-their-jobs>
- Foote, S. N. (2012). Succeeding to fail: The Lobster Syndrome. Retrieved from: <https://xstaticm.wordpress.com/2012/03/16/succeeding-to-fail-the-lobster-syndrome/>
- Fredrickson, R. R., McMahan, S. K., & Hansen-Thomas, H. (2017). Female faculty meeting the nexus of the academic triumvirate: Partnering with student organizations to get there. In S. Thompson & P. Parry (eds.) *Coping with Gender Inequities: Critical Conversations of Women Faculty* (pp. 123-136). Maryland: Rowman & Littlefield Publishing.
- Huenneke, L.F., Stearns, D.M., Martinez, J.D., & Laurila, K. (2017). Key strategies for building research capacity of university faculty members. *Innovation in Higher Education*, 42(421). Retrieved from: <https://link.springer.com/article/10.1007/s10755-017-9394-y#copyrightInformation>
- Humphreys, D. (2013). Deploying collaborate leadership to reinvent higher education for the twenty-first century. *Peer Review*, 15(1), 1-6. Retrieved from: <https://www.aacu.org/publications-research/periodicals/deploying-collaborative-leadership-reinvent-higher-education>
- Keast, R., & Charles, M. (2018). Ten rules for successful research collaboration. Retrieved from <https://theconversation.com/ten-rules-for-successful-research-collaboration-53826>
- Kiel, D. H. (2015). Creating a faculty leadership development program. Higher Ed Impact. Retrieved from <https://www.academicimpressions.com/sites/default/files/1215-faculty-leadership-md.pdf>
- Leisyte, L. (2016). Top down or bottom up? <https://www.insidehighered.com/blogs/world-view/top-down-or-bottom>
- Loeche, M. (2018). Three proven ways to higher ed collaboration. *eCampusNews*. Retrieved from <https://www.ecampusnews.com/2018/05/07/3-proven-ways-to-improve-higher-ed-collaboration-across-departments/>

- Mudrak, J., Zabrodska, K., Kveton, P., Jelinek, M., Blatny, M., Solcova, I., & Machovcova, K. (2018). Occupational well-being among university faculty: A job demands-resources model. *Research in Higher Education, 59*(3), 325-348.
- Pololi, L., & Knight, S. (2005). Mentoring faculty in academic medicine. Retrieved from: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1525-1497.2005.05007.x>
- Preuss, B. K. (2017). *The Care and Feeding of a Teacher*. Now is Good Press; USA.
- Shapiro, J. P., & Stefkovich, J. A. (2018). *Ethical leadership and decision making in education: Applying theoretical Perspectives to Complex Dilemmas* (5th ed). New York, NY: Routledge Publishing.
- Shapiro, J. P., & Stefkovich, J. A. (2005). *Ethical leadership and decision making in education: Applying theoretical Perspectives to Complex Dilemmas* (2nd ed). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Strike, A. (1991). The moral role of schooling in liberal democratic society. In G. Grant (Ed.), *Review of Research in Education* (pp. 413-483). Washington D.C.: American Educational Research Association.
- Teichler, U., Arimoto, A., & Cummins, W. K. (2013). *The changing academic profession*. Dordrecht: Springer Publishing.
- White, J. S. (2017). Don't they see? Faculty leadership matters. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/advice/2017/01/11/how-engage-more-faculty-leadership-roles-essay>

The Texas Forum of Teacher Education
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Manuscripts due June 14, 2019

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- Photographs/Artwork:** Authors are responsible for obtaining permission for the use of any artwork or photographs. Permission documentation must accompany manuscript submission.

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Send the following three documents to the managing editor, Dr. Michelle Giles, with the subject line, 2019 Forum Manuscript:

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