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Year in Program: 1<sup>st</sup>; Special Education

Proposed Mentor: Dr. Adrea Truckenmiller

Word Count: 699

## **Exploring the Role of Various Component Skills of Reading Comprehension for Autistic<sup>1</sup> Students**

It has been well-established that around 65% autistic students have difficulty with reading comprehension (Nation et al., 2006; McIntyre, Solari, Gonzales, et al., 2017; Solari et al., 2019). As reading ability is not only integral to academic success, but also in health and employment outcomes (Davidson, 2021; Morrisroe, 2014), it is imperative that schools and parents have a full understanding of the complex skills that intertwine during the development of reading comprehension so they can provide optimal instruction and intervention.

The simple view of reading (Gough & Tunmer, 1986; Hoover & Gough, 1990) has long been a guiding model of reading comprehension development. The theory asserts that reading comprehension is the product of two main components, word reading and listening comprehension. There is a recent model of reading comprehension called the Direct and Indirect Effects model of Reading (DIER) that expands the simple view of reading to include the various component skills (e.g., phonology, orthography, vocabulary, grammar, inference, perspective taking, comprehension monitoring) that support word reading and listening comprehension, as well as explains the pathways of relations between those skills (Kim, 2017, 2020a, 2020b).

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<sup>1</sup> I have chosen to use identity-first language (i.e., autistic students) to acknowledge the preferences of community members. I respect, and am engaged in, the ongoing conversation about language. For an in-depth review, please see Botha et al. (2021) and Bottema-Beutel et al. (2021).

For autistic students, no clear pattern has emerged from the existing research on reading abilities (Nation et al., 2006; McIntyre, Solari, Grimm, et al., 2017; Ricketts et al., 2013). What has become clear is that many autistic students do have reading comprehension deficits (Frith & Snowling, 1983; O'Connor & Klein, 2004; Solari et al., 2017). While there have been several studies investigating reading comprehension profiles in autistic students, and even how specific component skills are related to reading comprehension, the DIER model has yet to be tested in this specific population (Sorenson Duncan et al., 2021; Davidson, 2021). When this research is undertaken, it may allow investigators to understand what specific component skills are related to the breakdown in reading comprehension for autistic students, with implications for providing better instruction for autistic students.

### **Project Description and Goals**

If granted the Summer Research Development Fellowship, I plan to examine the existing research on factors that influence reading comprehension in autistic students. I will divide my time over the summer between examining the research literature; writing a systematic literature review; developing research questions for my apprenticeship project; finding extant datasets, searching for studies that have similar measures for decoding and reading comprehension, to compare autistic students to decoding-matched peers; and completing the *Yale Seminar on Autism and Related Disorders* (n.d.) course. I intend to use what I find and learn from this summer to form the basis of my apprenticeship project in the fall semester and to write a conference proposal for presenting my systematic literature review to a wider audience.

This project will help me further develop my research skills by focusing on these objectives:

1. To cultivate effective search strategies for literature and existing datasets

2. To develop a research question (about the components of reading comprehension for autistic students) that can be answered in a systematic literature review, which will be submitted for a conference presentation and potentially a publishable manuscript

### **Past Research**

In my current role as a Graduate Research Assistant, I participate in a variety of research projects. With my advisor, Dr. Adrea Truckenmiller, I have collected and organized a large dataset for our project evaluating literacy assessment in schools and I have worked on finding and synthesizing the literature for that manuscript in preparation. I have also worked this semester on Dr. Truckenmiller's project, Writing Architect, where I was part of the team responsible for finding current evidence-based interventions and creating a presentation for our advisory board. Additionally, in my work with Dr. Kristin Rispoli, I am helping to code behavioral observations for a project that is investigating an emotional regulation intervention for autistic children and their parents.

Prior to my admission to Michigan State, I attended Central Michigan University, where I completed an independent research project with my faculty advisor, Dr. Katrina Rhymer. I was also a research assistant on another of Dr. Rhymer's projects. Additionally, I completed a research project in the Spring of 2020 and the poster was accepted for presentation at the Student Research and Creative Endeavors Exhibition; however, the presentation was cancelled due to the pandemic.

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Word Count: 697

## **Synopsis**

As a former teacher and novice researcher, I feel grateful for the opportunity to study problems I observed during my time in K-12 schools. The Summer Research Development Fellowship (SRDF) is a way for me to connect the research skills I developed in year one of my program with my experience as a practitioner. Broadly, my research interests include English learners (ELs) and the ways schools support their success. Specifically, I am interested in ways school leaders impact ELs, and how school leaders are prepared to work with ELs. If awarded a SRDF, I will conduct a thorough literature review surrounding these topics, identify and understand theoretical frameworks that underpin school leaders' EL-focused professional learning opportunities, develop a set of research questions based on these topics, and build knowledge on methodological approaches that will answer my research questions.

## **Guiding Rationale**

School leaders have the authority and resources to leverage equity for ELs (Mavrogordato & White, 2019). Since they have the tools to change ELs' outcomes, what they learn about ELs is essential. Unfortunately, most school leaders do not have a background as EL-focused teachers, nor do they have access to professional learning opportunities on serving EL students that are geared toward leaders. Instead, they may be invited to teacher-focused learning opportunities or learning opportunities about laws. If school leaders are expected to leverage their power to impact ELs positively, more must be understood about what they know about ELs,

how they currently learn about them, and best approaches to building their knowledge base on EL students.

Prior research points to the important role school leaders play in leveraging their leadership role to promote equity for ELs (Callahan & Shrifer, 2016; Callahan & Hopkins, 2017; Mavrogordato & White, 2019). There is research surrounding EL-focused professional learning opportunities for pre-service (Sugimoto, et al., 2017; Kelly, 2018; Ramanayake & Williams, 2017) and in-service teachers (Babinski et al., 2018; Tong et al., 2017). In contrast, research that centers school leaders' EL-focused professional learning opportunities is scant. In literature that does center school leaders' learning opportunities, researchers often focus on pre-service learning opportunities (Callahan et al., 2019; Irby et al., 2020). Some studies come close, like Menken and Solorza's (2015) study on principals who ended their schools' bilingual education programs; interestingly, the authors conclude with suggestions for improving pre-service programs, with no recommendation for professional learning opportunities for in-service school leaders. Research that does center in-service school leaders' professional learning opportunities often relies on self-reported data from surveys (Lopez, 2013; Louie et al., 2019).

Researchers have established school leaders as important players in equitable outcomes for ELs; they have established the need for professional learning opportunities for pre- and in-service school leaders. However, research has not thoroughly described or evaluated current EL-focused professional learning opportunities for in-service school leaders. This is the gap I will begin to address with a SRDF.

### **Prior Research Skills**

Through my assistantships and coursework, I have:

- Participated in an academic journal's editorial process



- Learned guiding principles surrounding the literature review process
- Participated in web scraping data collection for a research project
- Learned research design principles
- Learned research paradigms' basic features

These skills and background knowledge will be a solid foundation for my proposed summer research.

### **Research Skills to be Developed**

This summer I plan to accomplish four goals:

1. develop a thorough literature review that allows me to be fluent in the language of professional learning opportunities for school leaders specifically as well as professional learning opportunities for all practitioners who work with ELs;
2. identify and understand theoretical frameworks that underpin why and how to provide high quality professional learning opportunities for school leaders and differentiate between how professional learning should be structured for school leaders versus classroom teachers;
3. develop a set of answerable research questions for future study;
4. identify and build background knowledge on methodological approaches that will be used to answer these research questions.

The SRDF will allow me to advance my research skills and background knowledge so I am well positioned to continue to advance my own research agenda. By the end of the summer, I will have developed skills and resources for use in my second year and beyond.

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Year: 1<sup>st</sup> year – CITE Program

Proposed Mentor: Dr. Kyle Greenwalt

Word Count: 698 words

### **Teaching Outside the Core: An Exploratory Mixed Methods Study Investigating Where, How, and Why High School Psychology is Taught**

Psychology is among the most sought after high school electives, which makes sense given its relevance in helping students understand topics as widespread as addiction, sexuality, and racism (American Psychological Association, 2022; Keith et al., 2013). Psychology's analysis of social relationships, discrimination, and biological bases of behavior also prepares students for empathy development and perspective taking, in which the broader social studies education community has called students and teachers engage so they may analyze their own identities and establish personal connections in their study of historical, political, and economic actors (Andolina & Conklin, 2021; Barton & Levstik, 2004; Garrett, 2017). Such perspective taking is especially important in light of recent calls for trauma-informed practices in social studies education (Garrett, 2011; Sondel et al., 2018; Yoder, 2020). Intermittently, calls are made to emphasize the importance of high school psychology (Keith et al., 2013; McEntarffer & Whitlock, 2022; Ragland, 1992). Yet, despite psychology's ongoing popularity and growing relevance, there is only a smattering of research exploring any element of secondary psychology.

Geography-specific research on secondary psychology is even less prevalent. Rural schools are less likely than urban and suburban counterparts to have the economies of scale to support elective courses such as psychology (Bouck, 2018; Walstad, 2001). Yet, psychology

could help students better understand racism and discrimination, which is increasingly important in rural communities as many rural schools have rich and growing populations of color and experience increasing calls to unpack issues of race following events such as the murder of George Floyd (Walker, 2021; Williams, 2018). Psychology can also facilitate better understandings of sexuality in rural communities, where 49% of rural LGBTQ youth felt their community was “somewhat or very unaccepting of LGBTQ people” compared to only 26% of urban and suburban youth (The Trevor Project, 2021, p. 1). Psychology can also help students better understand the prevalence of opioid addiction in rural communities (Chowdhury, 2022; Hale & Satel, 2018) and process the reality that 29% of rural children have experienced two or more adverse childhood experiences (Frankland, 2021).

### **Project Goals and Timeline**

My goal is to collect and analyze data exploring where, how, and why high school psychology is taught. This can ultimately inform future research directions on increasing rural access to quality high school psychology courses.

### **Goals Prior to SRDF**

In the fall, Dr. Greenwalt and I established a spreadsheet of MSU partner schools of varying geographies where psychology is taught and contact information for their psychology teachers. This semester, I will submit a proposal to IRB and create and distribute a basic mixed methods survey to these teachers, from which we can identify general patterns on where and how psychology is taught. I will also use my spring coursework to draft a literature review on secondary psychology education.

**Goals for SRDF**

I would begin by analyzing the mixed methods survey data and develop an initial research question. Next, I would identify approximately six of the surveyed teachers of differing geographies to interview with deeper questions on how and why these individuals teach psychology. For this, I would develop interview questions and learn effective techniques for interviewing research subjects. After conducting these interviews, I would transcribe and analyze these qualitative data.

**Goals following SRDF**

From the data analyzed over the summer, I will work with Dr. Greenwalt to develop conference proposals for the 2023 AERA conference and 2022 National Council for the Social Studies Conference. I will also develop manuscripts based on my findings, use the findings to inform psychology teacher education requirements at MSU, and inform research methods and directions for my practicum and dissertation.

**Skill Development**

I have limited research experience from my master's thesis in 2015, in which I developed a literature review and analyzed student written work samples. I will also write three literature reviews for my coursework this year, one of which required working within a theoretical framework. I propose to use the SRDF to learn how to develop a research question, collect and analyze mixed methods data, and conduct effective interviews, all of which will make me a more critical consumer of scholarship and empower me to more confidently conduct future research, both stemming from these findings and in other realms.

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