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Pennsylvania Teacher Educator

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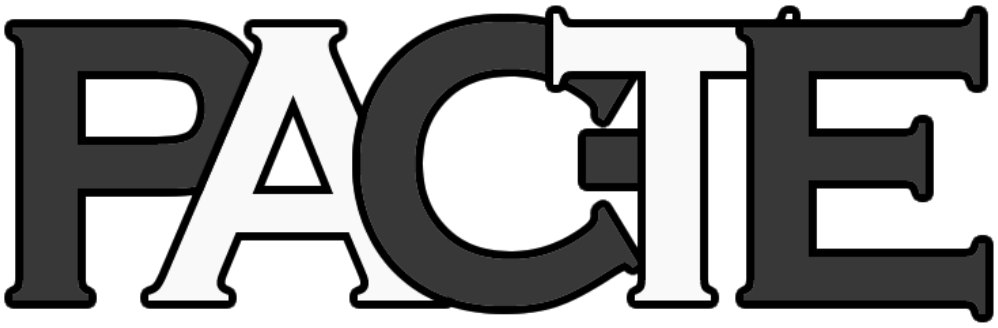

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Pennsylvania Teacher Educator

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Manuscript Reviewers

Call for Manuscript Reviewers

The *Pennsylvania Teacher Educator* is looking for teacher educators who are interested in becoming reviewers for the journal. Each manuscript that is submitted to the journal undergoes a blind-review process from three peer reviewers. Consequently, we are always in need of good reviewers who return manuscripts to the editors in a timely fashion. **Members who are interested in becoming a reviewer should contact** pacte.journal@sru.edu.

Pennsylvania Teacher Educator

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Call for Papers

Fall Issue manuscripts due February 20
Spring Issue manuscripts due September 20

The Pennsylvania Association of Colleges and Teacher Educators publishes a peer-reviewed journal — the *Pennsylvania Teacher Educator*. Our journal is intended to provide PAC-TE members with a venue to capture current research that makes use of quantitative, qualitative, and/or mixed-methods approaches, as well as rigorous theoretical works that capture current research, advances, and changes in the emerging directions of teacher education. Publication decisions are made following a blind-review process. Starting in 2021, the *Pennsylvania Teacher Educator* will move to publishing two issues per year, allowing more flexibility for writers to conduct and to report their research throughout the academic year. Though the Fall 2021 issue was by invitation only, commemorating 50 years of PAC-TE, the 2021 Spring issue and all issues going forward will be open for manuscript submissions.

Submission Guidelines

· Manuscripts should be no more than 12 pages of narrative (exclusive of references, tables, and appendices), using the latest APA style, and double-spaced with one-inch margins.
· Manuscripts should be submitted as an e-mail attachment, sent to PA Teacher Educator at pacte.journal@sru.edu.
· A cover page should include the title of the article, a brief (no more than 50-word) abstract, the name, position, place of employment, mailing address, phone number, e-mail address, and a 2-3 sentence description of background and experience of each author.
· The title of the article should also appear on page 1 of the manuscript, but do not include the name(s) of the author(s) on page 1.
· Pages should be numbered consecutively, including the bibliography, but the author's name should not appear on the manuscript itself.
· Charts or illustrative material will be accepted if space permits. Such materials must be camera-ready. Photographs will usually not be used, unless they are black and white and of high quality.
· Authors are expected to take full responsibility for the accuracy of the content in their articles, including references, quotations, tables, and figures. The editorial board reserves the right to edit articles accepted for publication.
· Authors of manuscripts accepted for publication are asked to sign a copyright release to PAC-TE. This allows PAC-TE to publish the information in the *Pennsylvania Teacher Educator*, to publish the information in future PAC-TE publications, and to grant permission to persons or organizations that formally request the right to reprint the material in whole or in part.
· Authors of manuscripts accepted for publication are also expected to make a presentation about their article at the PAC-TE Teacher Education Assembly in the fall or spring.

There is no remuneration for articles accepted for publication, but a complimentary copy of the journal will be mailed to each author. There is no fee for the review of the manuscript.

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A Journal of the Pennsylvania Association of Colleges and Teacher Educators

***PAC-TE** is dedicated to providing strong advocacy for teacher education within the Commonwealth by promoting quality programs of teacher education and providing a variety of forums for discussion of issues that are of concern to all who are engaged in teacher education.*

***Pennsylvania Teacher Educator** articles are provided digitally on the PAC-TE website. The fall issue is also available in hardcopy through pre-ordering prior to the fall PAC-TE Teacher Education Assembly.*

Joel Geary
PAC-TE Executive Director
Pennsylvania Association of Colleges and Teacher Educators
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Pennsylvania Teacher Educator is an official publication of the Pennsylvania Association of Colleges and Teacher Educators. The journal is published as a service to the members of the organization and others concerned with teacher education.

Pennsylvania Teacher Educator serves as a forum for the open exchange of ideas and information related to the improvement of teacher education at all levels. Points of view and opinions are those of the authors of the articles and do not necessarily represent the views of the organization.

Pennsylvania Teacher Educator is a peer-reviewed journal that depends on both potential authors and reviewers to produce a high-quality publication each year. We are always in need of reviewers with a wide variety of perspectives and expertise to help us with the biannual review process. Becoming a reviewer is a helpful way to give back to the profession of teacher education and to PAC-TE as an organization. If you would like to be a reviewer, email pacte.journal@sru.edu. Reviewers must be PAC-TE members.

Pennsylvania Teacher Educator

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On behalf of the other editors, Tom Conway and Jason Hilton, I would like to thank you for engaging with the inaugural spring issue of the *Pennsylvania Teacher Educator*. This inaugural spring issue represents a moment of transformation for the *Pennsylvania Teacher Educator.* If memory serves me, the idea of moving to two issues per year was born in O'Reilly's Tap Room & Kitchen during an informal meeting of the editors of the journal. The idea was born then but the transformation took time to develop and was only made possible by the teacher educators who continue to produce quality scholarship like that found in this issue. Thank you to all those who submitted manuscripts for this issue and congratulations to the authors whose articles follow. Thank you to the associate editors and manuscript reviewers who are identified in the previous pages for doubling their contribution of time and effort.

The cover, designed by Kimberly Norris, depicts the familiar stages of transformation of a butterfly from chrysalis to adult. This image seems appropriate for many reasons at this time in teacher education in Pennsylvania. As the pandemic seems to be waning and the weather warms it appears as though our schools, from prekindergarten through higher education, are emerging from a two-year long metamorphosis. Unlike this journal that saw an opportunity for change and seized upon it, the pandemic forced educators to change. What will emerge?

We know that learners and educators at all levels have been affected by the pandemic. Learners are experiencing learning loss caused by school closures, online instruction, modified instructional strategies, and hardships in the home. Educators are exhausted from switching their instructional formats on short notice and often teaching in multiple formats all at the same time. The educator shortage is real as many school systems are in desperate need of qualified teachers in the high-need content areas and nearly every school expresses a need for substitute teachers. The pandemic has forced many educators to reflect on what is most important and often they are choosing their families and their own well-being and are taking part in the "great resignation."

With those realities, the PAC-TE organization and its members are more important than ever as we emerge from the pandemic. The leaders of the organization continue to engage with PDE and other members lead initiatives to affect positive change in the educator preparation process. Juliet Curci's leadership within the Pennsylvania Educator Diversity Consortium and Priscilla Jeter-Iles' creation of the state-wide virtual monthly field directors' meetings with rotating leadership are just two examples of initiatives that launched over the past two years that show great promise for the future. What else will emerge?

Yours in education,
Jim Preston, Managing Editor

Promoting Democratic Engagement with Low-Stakes Discussion Board Interventions

Daniel Casebeer
Kayleen Pontoriero

Abstract: This study describes a series of interventions that enhanced preservice teachers' experiences with online discussion boards. Data were analyzed using an experimental posttest design, and findings indicate that the interventions not only improved the quality and substance of students' responses, but also promoted an equitable distribution of course-based social capital.

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Introduction

Online discussion boards provide permanent records of classroom discourse. Unlike formal essays, which are judged on the quality of the writing, discussion boards are often assessed on students' ability to articulate and explore ideas.

They relieve teachers of the burden of correction so they can focus on students' thinking, and furthermore create nonthreatening situations for learners who may be hesitant to take risks because they are overly concerned with mechanics.

While the format of online discussion boards varies from one teacher and platform to the next, their primary characteristic is the public sharing of information.

The Benefits of Online Discussion Boards

The benefits of teaching with online discussion boards are well documented. In addition to providing students with opportunities to work at their own pace, they have also been shown to enhance collaboration, facilitate critical thinking, and increase feelings of social presence (Cho & Tobias, 2016; Joksimović et al., 2015).

Despite their ability to promote inclusivity and improve academic outcomes, students often have negative perceptions of their utility, especially when they are required to respond to their classmates, and/or dismiss discussion boards as boring, ineffective, or repetitious (Kauffman, 2015; Kent et al., 2016; Kurucay & Inan, 2017).

Some of the specific issues that students have with responding to their peers include being frustrated with their classmates' lack of engagement, feeling a need to avoid conflict or censor themselves, or simply forgetting that reviews are due after making their initial posts (Aloni & Harrington, 2018; Clinton & Kelly, 2020).

Best Practice for Teaching with Online Discussion Boards

In order to mitigate students' concerns and improve the quality of online discussion boards, it is important for teachers to outline the criteria for responses, actively participate in the conversation, and provide timely feedback (Aloni & Harrington, 2018; Chen & Chiu, 2008; Lee, 2013; Wyss et al., 2014).

Other recommendations for best practice include enabling students to see each other's posts and dividing larger classes into smaller working groups (Akcaoglu & Lee, 2016; Arend, 2009; Jacobi, 2017). It can also be helpful to mimic in-person discussion strategies, such as utilizing Socratic questioning techniques or assigning students specific roles: for example, as Moderators, Instigators, or Skeptics (Olesova et al., 2016; Strang, 2011).

Research Questions

This study extends the literature by describing a series of low-stakes interventions that can be used to facilitate online collaboration. These interventions seek not only to improve the quality and substance of students' responses, but also to promote the equitable exchange of ideas and facilitate democratic engagement.

This research was prompted by the desire to improve students' relationships with online discussion boards, to foreground and simulate the practice of asynchronous conversation, and guided by the following set of questions:

1. How can teachers improve the quality of students' work?
2. How can teachers improve the substance (length) of students' responses?
3. How can teachers ensure an equitable distribution of students' responses?

Table 1
Assessment Criteria and Theoretical Frameworks for the Quality Intervention

Assessment Criteria	Theoretical Frameworks
Contributes new ideas or perspectives to the discussion.	Garrison et al. (2001)
Expands on the ideas or perspectives of previous posts.	Jeong (2005)
Makes references to course materials or other outside sources.	Beckmann & Weber (2016)
Asks questions that have the potential to advance the conversation.	Weltzer-Ward et al. (2009)
Answers questions with evidence that supports position.	Andresen (2009)

Methodology

Data were collected from online discussion boards (n=96) housed in Canvas over a three-year period and analyzed with inferential statistics at posttest. The first intervention focused on the quality of students' responses. The second focused on the substance of students' responses. And the third focused on promoting more equitable student-to-student discourse.

The control and experimental groups were randomly selected from multiple sections of an upper-level education course at a small liberal-arts university in western Pennsylvania. The Quality Intervention was applied during the first year of the study. The Substance Intervention was added during the second year. And the Equity Intervention was added during the third year.

Improving the Quality of Responses

The quality of online discussion boards depends on their ability to approximate the interplay of face-to-face conversations. It is important for students to feel like they are participating in an actual exchange, rather than simply responding to a set number of their peers (Gilbert & Dabbagh, 2004; Pena-Shaff & Altman, 2015; Wang, 2019).

Students in the control groups were instructed to respond to three of their classmates after making their initial posts. Students in the experimental groups were also instructed to respond to three of their classmates; however, they received more structured instructions for advancing the conversation (Andrade, 2000).

Table 1 presents the assessment criteria and theoretical frameworks used to assess the quality of students' posts. Posts that met any of the criteria were coded as "Advancing the Conversation" and assigned a numerical value of 1. Posts that did not meet any of the criteria were coded as "Ending the Conversation" and assigned a numerical value of 0. Students in both the control and the experimental groups received the same rubrics and were evaluated on the number and not the quality of their peer reviews.

Enhancing the Substance of Responses

The length of students' posts, especially when they involve peer reviews, often depends on how teachers assign and make use of deadlines. To encourage more substantial engagement, it is important to set multiple due dates for initial and follow-up responses so that students have more time to contribute to the conversation (Black, 2005).

Table 2
t-Tests on the Quality and Substance Interventions

Inter.	Group	N	M	SD	df	t	t Crit.	p
Quality	Con.	16	.35	.17	15	21.97	4.87	<.01
	Exp.	16	.76	.17				
Sub.	Con.	16	67	23.32	15	22.49	2.99	<.01
	Exp.	16	187	63.08				

Table 3
F-Test on the Equity Intervention

Inter.	Group	n	M	SD	df	F	F Crit.	p
Equity	Con.	16	2	1.97	15	2.64	2.40	<.01
	Exp.	16	2	1.21				

Students in the control groups were expected to submit their peer reviews within two days of the deadline for their initial posts. Students in the experimental groups were also expected to submit their peer reviews within two days; however, they were not permitted to submit their reviews until after the deadline for their initial posts.

While students in the control groups were permitted to respond to any of their peers at any time, students in the experimental groups were assigned "first-response" partners that changed for each assignment. After responding to their "first-response" partners, students were permitted to respond to any of their peers (see Figure 1).

Promoting Democratic Engagement

Regardless of when students are expected to submit their peer reviews, those who make their initial posts early have the most visibility and typically receive the largest number of responses. This leads to an inequitable distribution of course-based social capital, which can produce disproportionate student experiences (Casebeer, 2021).

For the purpose of this study, course-based social capital is defined as the resources that students attain or have access to as a result of student-to-student discourse, including the relationships they develop during discussion board assignments that can provide more nuanced opportunities for future engagement (Van Rossem et al., 2015).

Analysis

The researchers applied t-tests to the Quality and Substance Interventions to test the null hypotheses that there were no differences in terms of the quality and substance of students' responses between the control and experimental groups. An F-test was applied to the Equity Intervention to test the null hypothesis that the responses that students received were equitably distributed.

For the Quality Intervention, the dependent variable was the students' average capacity for advancing the conversation. For the Substance Intervention, the dependent variable was the average length of the students' responses. And for the Equity Intervention, the dependent variable was the average number of responses received.

Figure 1
Sample Matrix "First-Response" Partners

DISCUSSION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Social Cartography	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Educational Psych.	3	4	5	6	7	8	9	10	11	12	13	14	15	1	2
Critical Literacy	4	5	6	7	8	9	10	11	12	13	14	15	1	2	3
Postmodern Theory	5	6	7	8	9	10	11	12	13	14	15	1	2	3	4
Politics of Space	6	7	8	9	10	11	12	13	14	15	1	2	3	4	5
Trauma and Empathy	7	8	9	10	11	12	13	14	15	1	2	3	4	5	6

Note: During the discussion on Social Cartography, for example, Student 1 would have to first respond to Student 2, Student 2 would have to first respond to Student 3, and so on.

Results

Table 2 presents the results of the t-tests that were conducted on the Quality and Substance Interventions. In both cases, the mean scores were higher in the experimental groups than in the control groups.

Table 3 presents the results of the F-test on the Equity Intervention. The standard deviation for the equity of students' responses was lower in the experimental groups than in the control groups.

For all three interventions, the tests revealed statistically significant differences between the groups and the null hypotheses were rejected.

Discussion

The results suggest that all of the interventions were successful. Providing students with criteria for responding to their peers improved the quality of their work. Creating two windows for engagement, one for making initial posts and one for making follow-up responses, increased the length of students' responses. Assigning "first-response" partners also encouraged a more equitable distribution of responses.

Unpacking the Quality Intervention

Without specific guidance for how to respond to their peers, students in the control groups struggled to advance the conversation. As Table 2 suggests, students in the experimental groups were more than two times as likely to contribute new ideas, expand on previous posts, make references to relevant materials, or ask pertinent questions.

Many of the responses in the control groups that were coded as "Ending the Conversation" offered little more than personal affirmations, such as "Great work!" or "I totally agree!" While students technically met the requirements—they responded to three of their peers—their responses provided little in the way of substance to their peers and effectively ended the discourse.

Offering suggestions for advancing the conversation in the directions improved the quality of student work without raising the stakes of the assignment: that is, students did not have to refer to the rubric for anything more than the minimum number of responses. This empowered them not only to engage in a more fluid discourse, but also to focus on the immediate conversation rather than the mechanisms of assessment.

Table 4
F-Test on Students' Second Responses During the Equity Intervention

Inter.	Group	n	M	SD	df	F	F Crit.	p
Equity	Con.	16	1	1.26	15	3	2.4	<.01
	Exp.	16	1	.73				

Unpacking the Substance Intervention

With the exception of first responders, who sometimes forgot to return to the discussions to acknowledge their peers, students in the control groups typically posted their initial and follow-up responses at the same time. Even though their peer reviews were not due until two days after their initial posts, many of them were finished posting by the first deadline.

According to Table 2, students in the experimental groups wrote approximately three times more than their counterparts in the control groups. This increase may be attributed either to the additional time students received to formulate their ideas, or to the respite they received from not typing their initial posts and responses concurrently.

Once again, students in both groups received the same rubric and were evaluated with the same criteria, and there was no benefit to writing more unless the students actually had something to contribute. This suggests that students in the control groups viewed peer reviews as extensions of their initial posts rather than as a means to collaborate with their classmates.

Unpacking the Equity Intervention

The first 10% of students to post in the control groups received more than 50% of their peers' responses. Similarly, the last 50% of students to post received less than 10% of their peers' responses. This led to lopsided conversations, and some of the late responders in the control groups did not receive a single response all semester.

As Table 3 suggests, the responses in the experimental groups were more equitably distributed than the responses in the control groups; in this case, a tighter standard deviation implies more equitable participation. While the Equity Intervention ensured that each student received at least one response to their initial posts, an unforeseen benefit was that students' second responses were more equitably distributed as well (see Table 4).

In some cases, students in the experimental groups forgot to respond to their "first-response" partners. Rather than reducing their scores for responding to the wrong peers, they received gentle reminders about the importance of following the response schedule, and many of them self-corrected.

Building Better Discussion Boards

With a bit of planning, asynchronous online discussion boards can provide students with low-stakes writing opportunities that not only promote higher-level engagement with course concepts, but also increase their social capital. This can improve the effectiveness of each subsequent discussion, as students feel more comfortable responding their peers.

To improve the quality of students' responses, teachers can provide students with recommendations rather than rules for advancing the conversation. Instead of simply asking them to respond to a set number of their peers, they can advise them to respond with new perspectives, references to course materials, or questions that expand on previous posts.

To encourage students to write more substantial responses, teachers can set mutually exclusive windows for initial and follow-up responses. This provides students with more time to think before responding to their classmates and cuts down on the tendency to meet an assignment's minimum standards as quickly as possible.

Finally, to improve equity and ensure that students feel like their work is being seen, teachers can assign "first-response" partners. This can be as simple as creating a generic flowchart in which Student A responds to Student B, Student B responds to Student C, and Student C responds to Student A, and then cycling through the list for the next assignment.

The Quality, Substance, and Equity Interventions can be applied to almost any asynchronous online discussion board with very little oversight. In addition to improving the depth and length of student responses and promoting democratic engagement, these strategies have the added benefit of maximizing response time for teachers. The instructions are universal, which gives teachers more time to participate in the conversation, and the assessment criteria is minimal, which gives them more time to provide individualized feedback.

While there are numerous ways that students can collaborate online, including live chats and interactive whiteboards, asynchronous discussion boards often provide the foundation of learning in the virtual environment.

In much the same way that real-time conversations can spark curiosity and produce unexpected outcomes, these assignments can lead to new lines of inquiry, especially when teachers address students' concerns and foster an authentic discourse. The interventions presented in this study provide a step in the right direction; however, there is still work to be done, and there is always room for new innovations.

Limitations and Recommendations

This study was limited by a small sample size, which decreases its generalizability. Even though data were collected from almost one hundred online discussion boards over a three-year period, they were collected from the same upper-level education course at the same institution. Future research could expand on this work by applying these interventions not only to other courses at different levels, which would reach students majoring in different fields, but also at institutions that serve larger populations.

This study was also limited by its quantitative approach to the data, and future research would benefit from a mixed methods approach. For example, while this study was able to conclude that the substance of students' responses improved by setting mutually exclusive windows for initial and follow-up responses, it could not say why.

Similarly, while this study was able to conclude that the equity of students' responses was improved by assigning "first-

response" partners, it could only speculate and not determine how that led to better in-course outcomes. Recommendations for future inquiry include interviewing participants about their perceptions of online discussion boards and analyzing trends across content areas.

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Teacher Preparation in Pennsylvania: Alignment to the National Reading Panel Findings

Dawn Durham
Amy L. Naccarelli

Abstract: Students across Pennsylvania are demonstrating an inability to meet proficiency expectations in reading. Emphasis has been on schools of education as one originating source of difficulty with reading instruction. Five universities and colleges in Pennsylvania were analyzed utilizing document analysis of undergraduate course syllabi, schedules, and final exams of 13 required undergraduate courses. The findings of this qualitative study illustrate the participating schools of education are instructing on the pillars of reading in parallel and proportionately less than non-evidence-based practices. The authors offer a four-tier approach to strengthen teacher candidacy programs.

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Introduction

Over the span of twenty years, educators and policy-makers have focused attention on the importance of assuring all children become skilled readers by providing the provision of quality reading instruction by highly qualified teachers (Podhajski et al., 2009). In an attempt to identify the critical components influential in instruction of reading, the National Reading Panel (NRP) was formed. The NRP Report (NICHD, 2000) has been widely accepted among the education field as a summary of principal research findings related to the essential components of the teaching of reading. This report identified five areas in reading instruction decisive to closing the achievement gap. Those five areas of reading are the explicit and systematic instruction of 1) phonemic awareness, 2) phonics, 3) fluency, 4) vocabulary, and 5) text comprehension (NICHD, 2000).

With these areas of instruction identified, the question remains as to why our national literacy scores are displaying poor results. Attention has shifted to the educator providing the instruction. The knowledge-base of teachers and their ability to provide high-quality instruction has been reported on for nearly twenty years. A significant gap appears to exist between research and practice, distancing teachers from the most prominent research proposed to aid daily reading instruction. Those present in primary classrooms demonstrate a minimal understanding or misperception about reading acquisition (Kilpatrick, 2015; Moats, 2009b; Spear-Swerling, & Owen Brucker, 2004). The importance of teacher capacity, as it relates to reading instruction, cannot be overstated.

Teachers are unable to pass on the necessary skillset and understanding of the basics of our language constructs when they themselves do not have the essential foundational expertise to possess such understanding. This is known as the "Peter Effect." Based on a biblical story of the Apostle Peter who when asked for money by a beggar replied he could not give what he himself did not have (Binks-Cantrell et al., 2012). Without the necessary skillset, teachers are woefully unprepared for the demands of teaching the arduous task of reading to the youngest learners.

Given the predominant influence of teacher knowledge, why are primary grade teachers inadequately prepared to teach reading? Teacher preparation programs developed nationwide repeatedly neglect the scientific evidence identifying the essential elements of instruction needed to produce proficient readers. During the congressional testimony provided by Dr. Reid Lyon in 1998, it was reported that most teachers receive little to no formal instruction in reading development (Lyon & Weiser, 1998). Extensive investigation into the education preservice teachers receive while attending teacher education programs has occurred to support these claims. Many studies have documented preservice and novice teachers' feelings of confidence and readiness to teach beginning and struggling readers (Bos, et al., 2001; Cheesman, et al., 2009; Fenty & Uliassi, 2018, Moats, 1994, 2009a, 2009b; Washburn, et al., 2011). These studies indicate a need for more robust instruction around reading acquisition and the delivery of efficacious reading instruction. While evidence suggests the misalignment between research and practice is apparent in colleges and universities across the nation, studies specific to Pennsylvania's schools/colleges of education regarding this misalignment has not yet been conducted. The research question remains, "To what extent do Pennsylvania schools/colleges of education literacy courses equip preservice candidates with the foundational knowledge and skillset to

deliver effective reading instruction aligned with the National Reading Panel?"

Methodology

The current research study employed a qualitative approach in which undergraduate required courses were included if they met two criteria:

1) Any course that could plausibly teach early reading instruction. This would include courses titled 'early reading', 'language arts', 'reading assessment', 'reading across content areas', or courses referring to reading methodologies or practices.
2) Any course that is required of undergraduate students engaged in the Pre-Kindergarten to grade four teacher certification track.

The study engaged in document analysis in an attempt to answer the guiding research question. Documents for this study took on a variety of forms and included course syllabi, course schedules, and final course exams obtained from five universities and colleges across the Commonwealth of Pennsylvania. The study analyzed teacher education programs and their alignment to the exposure of these critical elements, time allocation devoted to instructing these five components, and the accountability of preservice teachers comprehending and applying acquired learning regarding the five elements. In total, an analysis of 13 courses in education programs from across the five universities and colleges of were included in this study.

Each required undergraduate course offered at the five participating universities and colleges was analyzed by the intended course content discernable through the course syllabi. While not every aspect of instruction is likely to be present on a course syllabus, the over-arching concepts and understandings are evident on a syllabus. Course schedules for each of the required undergraduate courses were used to determine the degree to which these Pennsylvania's teacher education programs allocate time for the instruction of each of the five identified components. The third unique data source was final exams for the required undergraduate courses. Final exams allowed for the exploration of what preservice teachers are held accountable for knowing and applying into practice as it relates to the foundational elements of reading instruction identified by the NRP.

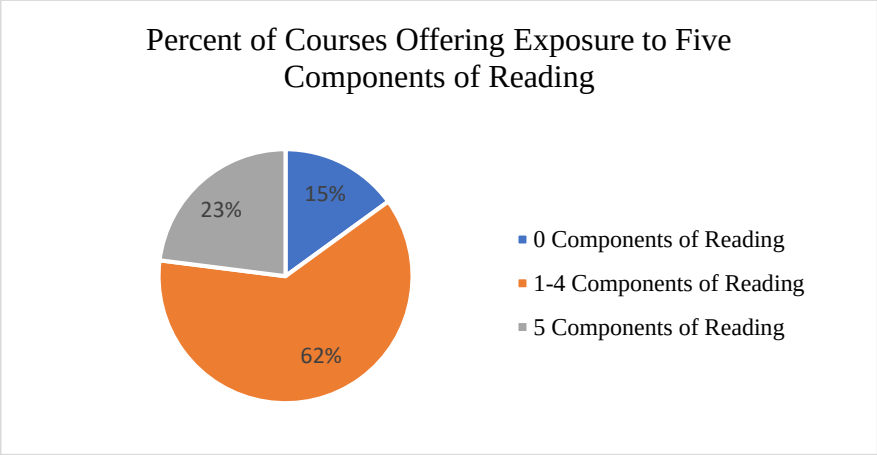
Findings

Exposure

In this research study, 11 of the 13 undergraduate courses analyzed did provide exposure, to some extent, to at least one of the five components identified by the NRP. The 11 undergraduate reading courses that did expose preservice candidates to one or more of the five domains did so in varying degrees. Figure 1 displays the percent of courses in which preservice teachers' exposure to the identified domains of reading was present.

Figure 1

Percent of Courses Exposing Preservice Teachers to the Domains of Reading Identified by the National Reading Panel



Of the majority of courses that did expose teacher candidates to the identified elements of proficient reading, only three (23%) of the required courses provided instruction in all five domains. Although three of undergraduate required courses did provide instruction in all five critical domains, the analysis of material related to these courses uncovered several contradictions. Though teaching preservice teachers about systematic phonics was present through course lectures, the approach of balanced literacy through guided reading and the cueing system was similarly evident. Guided reading and the cueing system derive from the whole language approach to reading; this approach contradicts the methodologies recommended by the NRP. In addition to course objectives and assignments displaying inconsistencies, course descriptions displayed this pattern as well.

Of the courses reviewed for this study, eight (62%) courses offered variable magnitudes of exposure to the five elements from the NRP. This exposure ranged from one to four elements explored in the course. One of the 13 courses exposed teacher candidates to only one critical component identified for reading instruction, that component being phonemic awareness. Phonemic awareness, while not mentioned in any course objective or course competency, was taught through the course as indicated on the course schedule and lecture topics. The avenue of instruction for phonemic awareness specifically focused on the articulation of English phonemes. Phoneme articulation is an essential facet of phonemic awareness but merely a facet. Several university and college courses did not offer a continuum of knowledge building through course matriculation, rather focused on chosen elements viewed as important for future teachers' proficiency. One particular course's stated objectives and expectations focused on developing one's own philosophy of how to teach reading opposed to instructing on the empirical evidence of reading acquisition.

Among this major group of eight courses, there was overwhelming evidence of whole language through the instruction of guided reading practices and a balanced literacy approach. Practices such as reading workshop, using leveled readers, and the cueing system were present in all course lectures and assignments. Assessments such as the Developmental Reading Assessment (DRA) and running records were offered as

scientifically based assessments. The courses demonstrated a whole language approach to reading with sporadic teaching of scientifically grounded evidence highlighted by the NRP. Two of the analyzed courses did not offer any exposure to the five elements of reading as identified by the NRP.

Although elements from the NRP were documented at varying degrees across the undergraduate courses, many inconsistencies existed throughout. Course objectives, lecture topics, and assignments overpoweringly highlighted guided reading within balanced literacy, a whole language approach to reading acquisition and instruction. Such instruction deemphasizes code-based instruction, which is the recommendation of the NRP.

Time Allocation

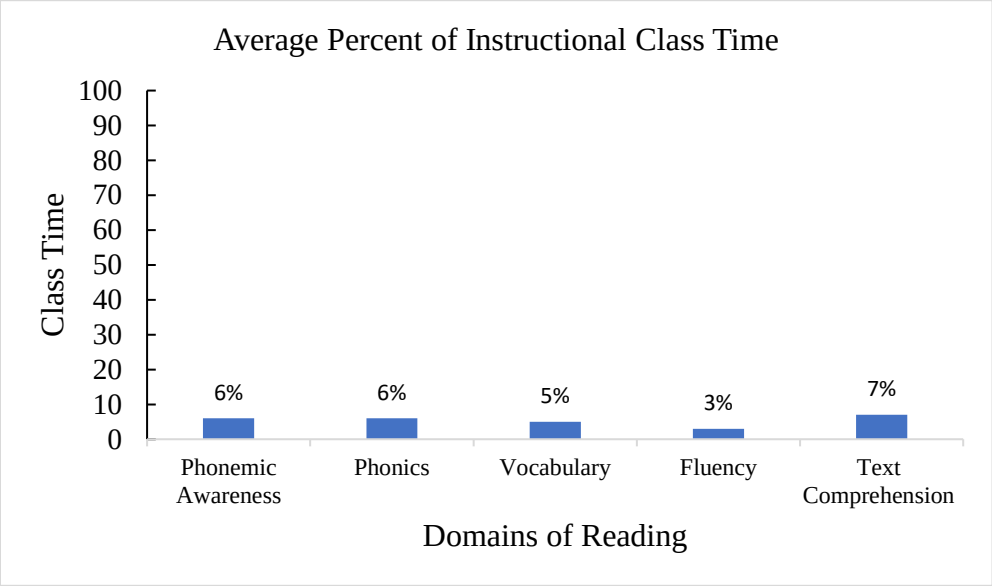
The analysis of course schedules permitted a time study to determine the allocation of instructional time to each of the five critical elements identified by the NRP. This time study allowed for perspective on what each course emphasized and deemed relevant and pertinent to instruction for preservice teachers. Through the investigation of 13 required undergraduate education courses from five Pennsylvania universities and colleges, a total of 2,484 hours of instruction was reviewed through this document analysis. Of the possible instructional hours, the time dedicated to each of the five critical elements of reading identified by the NRP varied from course to course.

Analysis of lecture topics and assignments revealed little instructional time dedicated to each of the five necessary components of reading. Figure 2 displays the percent of undergraduate course time devoted to each element of reading. From all courses investigated, the least amount of instructional time was devoted to fluency, the automaticity of word retrieval. An average of 3% of instructional class time was devoted to this instruction for teacher candidates to focus on this critical element. Lecture topics concentrated on the understanding of accuracy and rate as the determining factors of fluency. The second to least amount of instructional time was dedicated to vocabulary with merely 5% of classroom lessons going towards building the academic language of students. Evidence collected revealed vocabulary lectures spoke to the difference between direct and indirect instruction. There was detection of the classification of tiered vocabulary words in lecture topics.

Phonics, the mapping of sounds onto our printed symbols, and the foundational skill of phonemic awareness were present in course topics, lectures, and/or assignments on average 6% of scheduled class time. Lecture topics and instructional time concentrated on the three levels of phonemic awareness with limited expectations for teacher candidates to produce independent assignments targeted to phonemic awareness. Phonics instruction varied from course to course. Lecture topics included the alphabetic principle, automatic word recognition, and the use of methodologies for teaching phonics. Those methodologies largely consisted of non-scientifically-based practices such as the use of a word wall, context clues to decode, and structural analysis of printed words. The most class time (average 7%) was earmarked for comprehension. Lecture topics analyzed focused on specific comprehension strategies, literacy elements of text, and text structures.

Figure 2

Average Percent of Class Time Allocated for Domains of Reading Identified by the National Reading Panel



While minimal time was dedicated to the five components of reading, other literacy foci were addressed at great length. An average of 13% of class lectures were devoted to the practice of guided reading with the assessment of running records pervasively used. Running records are a non-evidence-based practice concentrating on meaning-based versus code-based instruction. That is more than double the amount of teaching hours dedicated to phonics. This practice consumed more instructional hours than those foundational elements of reading identified by a panel of literacy experts.

Accountability

Through the exploration of final course exams of the 13 undergraduate courses involved in this study, the perception of what preservice teachers are held accountable for knowing and applying as it relates to the foundational elements of reading instruction identified by the NRP was investigated. This research study was unable to include data from all 13 undergraduate course exams, as five of the courses did not share their final exams for document analysis. While the research is unable to compare emphasis on accountability measures through exam questions related to the five elements of reading, several notable observations were made among the eight final exams that were analyzed.

Of the courses that did provide instruction on one or more of the five elements of proficient reading identified and final course exams shared, each one held preservice teachers accountable for retaining the subject matter to some extent. Table 1 exposes the percent of exam questions related to each of the five components of reading as identified by the NRP for the eight undergraduate courses that provided final course exams.

Table 1

Percent of Queries Related to Each Component of Reading as Identified on Final Course Exams

Exam Number	Phonemic Awareness %	Phonics %	Vocabulary %	Fluency %	Comprehension %
1	0	100	0	0	0
2	31	11	4	14	26
3	10	2	2	4	6
4	9	24	14	0	0
5	15	23	12	12	12
6	0	0	0	0	0
7	0	0	0	0	0
8	11	17	11	5	5

Note. Exam # indicates the coding number of each exam shared through data collection. Percent of course exam questions that directly related to the five components of reading as identified by the NRP. The two assessments presented without any questions also did not provide any instruction related to the five components.

As is discernable from the data shared, the courses analyzed for this study placed varying levels of pertinence on the components of reading. In addition to the number of questions related to each domain, the exam questions themselves were important to consider in terms of emphasis and how well these education programs prepare teacher candidates. Phonemic awareness was addressed in five of all exams collected. Questions pertaining to phonemic awareness were comprised of content knowledge around all three levels, early, basic, and advanced; in addition, they addressed the issue of how to provide instruction to young learners.

Of all the exams analyzed, four (50%) addressed phonics more than any other domain as evident through the number of questions directly related to phonics, phonetic patterns, or instructional practices related to phonics teaching. Preservice teacher knowledge was assessed either through a very specific test of teacher knowledge, such as the *Phonics Test for Teachers*, or through probes intended to measure the understanding of the sound to print relationship. Only one exam asked teacher candidates to explain why teaching phonics was important. How to assess phonics knowledge in young readers or how to intervene in the event of a struggling reader, was absent in course exams.

Vocabulary was the least addressed element of reading. Teacher candidates were asked to explain the tiers of vocabulary and identify words that would be identified in each tier. Effective approaches (oral language, direct and indirect instruction, wide reading) to instruction for young readers in the area of vocabulary was observed. Preservice teachers were assessed on areas of comprehension overwhelmingly related to comprehension strategies. Such queries related to comprehension strategies, such as when and how to have students make predictions, guiding visualization tasks, when students need to use inferencing skills, and how to identify the main idea and details in a selection of text. Very few questions were present regarding the role background knowledge contributes to a child's ability to

comprehend text. There was little evidence among all the examinations analyzed of the importance fluency with word recognition has on one's comprehension ability. Fluency questions on the investigated course exams were minimal and concentrated on the concept that fluency was merely reading at a desired rate.

Evident in all exams explored for this research study were inaccuracies and misinformation regarding the elements of proficient reading and the instruction of reading to young learners. Terms were used incorrectly, courses emphasized classroom activities that are not aligned to evidence-based practices, and hindrances to reading were addressed as effective practices. On two final assessments, the terms *letters* and *graphemes* were used synonymously. Those terms are not interchangeable yet used in this way in final exam questions. The importance of teaching students multiple decoding strategies rather than one method, phoneme-grapheme correspondence, was present on half of all exams. The belief that there has been no identification of one way to teach reading to beginning readers and/or struggling readers appeared on two-thirds of final examinations. Inaccuracies such as these may impede preservice teachers from becoming experts in their field.

As it was apparent with more than half of the undergraduate courses that underscored guided reading through course lectures and assignments, course exams also emphasized holding teacher candidates accountable for retention of such information. Course exams overwhelmingly evaluated preservice teachers on knowing how to prompt readers by directing attention to the picture clues rather than to the sound-symbol correspondence to decode unknown words. The cueing system employed in a guided reading lesson appeared frequently on course assessments asking teacher candidates to explain the cues or prompts provided to students when struggling to read an unknown word. Such cues included looking at the picture, identifying the first letter in the word, and guessing what word would make sense in the sentence. In alignment with the cueing system exercised in a guided reading lesson, leveled text was accentuated as the most applicable way to provide practice for young readers. Repeatedly in the course exams that were available for investigation, decodable text was misconstrued to be a hindrance to beginning readers because of the less than attractive nature of such books, contrived text, and overwhelming use of a specific phonics pattern, all of which are the premise of decodable text to offer repeated exposure to a particular phonics pattern. Teacher candidates were offered opportunities in three of the final exams to identify errors in oral reading by using the whole language assessment tool of running records to conduct miscue analysis. Of the eight course exams investigated for this research study, one did pose a question to preservice teachers about the NRP. This exam question was offered as extra credit to preservice teachers. To receive the additional points, teacher candidates had to list all five areas identified in the NRP Report published in 2000.

Teacher candidates engaged in instruction from the participating courses likely leave their education programs at varying levels of proficiency and expertise as it relates to reading. The evidence collected in this research study indicates a lack of consistency among the studied education programs in exposing preservice teachers to the NRP's findings, allocation of learning time to the instruction of these findings, and holding teacher candidates accountable for the knowledge and skills of delivering effective reading instruction. The answer to the question of why children in Pennsylvania schools continue to demonstrate weak reading proficiency is partially found in how the

education programs studied here fail to adequately prepare future teachers to provide the necessary instruction needed to build such capacity.

Discussion

The National Council on Teacher Quality (NCTQ) in 2006 found a large majority of colleges and universities failed to provide instruction in all five components of reading as identified by the NRP (Walsh et al., 2006). These findings were similar to what was discovered in this sample of schools in Pennsylvania. Less than one-fourth of the courses analyzed for this research study exposed teacher candidates to all five identified areas of reading. With eight of the 13 courses providing exposure to one to four elements of reading, the varying degree to which preservice teachers receive instruction on the five components of reading confirms the initial assumption that preservice teachers are not adequately prepared to teach reading at these institutions. What teacher educators place value on for instruction can be observed in their course syllabi and assessments. On the national level, Walsh and colleagues (2006) discovered much attention given to the whole language practice of guided reading. This study found similar findings in a small population of Pennsylvania-based teacher education programs. An average of 13% of instructional time was devoted to guided reading with the use of running records. This is more than double the amount of teaching hours, on average, courses dedicated to the mapping of sounds onto print, phonics. The dichotomy of both guided reading and phonics present in coursework leaves preservice teachers to determine, for themselves, which practices to embed into classroom instruction.

In the education courses studied, all five components of reading were given minimal instructional time, ranging from 3% to 7%, however, a significant amount of time was dedicated to other foci, which largely resembled whole language practices. Additionally, the courses analyzed for this study did not afford teacher candidates opportunities to attain sufficient instruction on evidence-based practices particularly as they relate to reading.

The 13 courses, from a small sample of universities and colleges in Pennsylvania, allocated abundant instructional time to practices not grounded in evidence. Mirroring national findings, in the education courses studied here whole language approaches dominated lectures and course assignments. Teacher educators presented non-scientifically based reading research in parallel to scientifically based reading research at a disproportionate and alarming rate, as evidenced through the analysis of instructional content and allocated time provided to preservice teachers. Teacher candidates are then left to parse for themselves what knowledge and practices are grounded in research from those simply grounded in the beliefs or experiences of the teacher educators. With overwhelming amounts of course content, instructional time, and accountability measures allocated to whole language instruction, preservice teachers' views of reading and reading acquisition are likely inappropriately skewed in this direction.

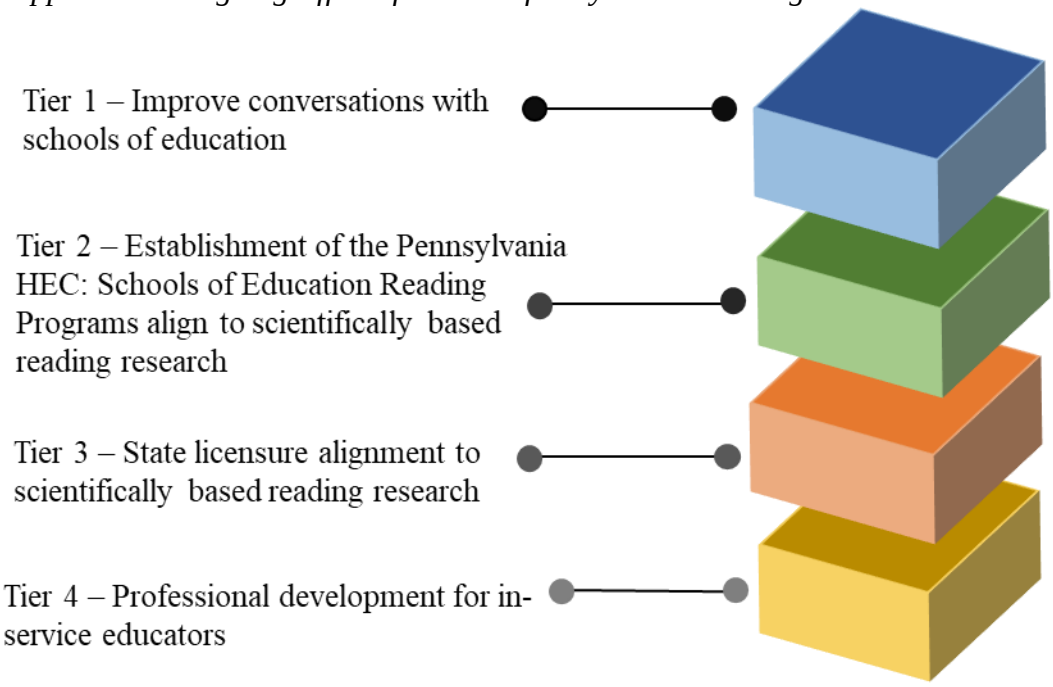
Implications for Policy and Practice

Analysis indicates that the five education programs in this study are not exposing preservice teachers to the critical components of reading determined by the NRP. Courses designed for the instruction of reading and reading acquisition were shown to allocate minimal instructional time toward the identification of these elements and how to instruct young readers in each reading component. In examining final course exams, preservice teachers are being held to

varying degrees of accountability regarding understanding the five components of reading. The findings of this research study indicate the need for a more strategic and systematic approach to amending the misalignment of teacher education programs with scientifically based reading research and instruction. Based on this study, a four-tiered approach is proposed. Figure 3 displays each suggested tier necessary to address the education of preservice teachers and increase alignment to the findings of the NRP.

Figure 3

4-Tiered Approach to Aligning Efforts for Scientifically Based Reading Instruction.



Tier 1 addresses the manner in which schools of education engage in efforts to properly prepare teachers through communication with those in the profession. With the recent release of the podcast episode, Hard Words: Why aren't kids being taught to read? (Hanford, 2018) much attention has been given to institutes of higher education, specifically schools of education reading programs. This podcast discussed what reading programs across the nation were and were not providing to preservice teachers.

Hanford (2018) did what others have been writing about for more than 10 years, declaring that schools of education are not providing instruction to teacher candidates that aligns to scientifically based reading research. Harsh criticism dominates the narrative regarding universities and colleges and their lack of appropriate teacher preparation. Teacher education has been identified as a significant factor in why our nation's children are unable to meet proficiency standards in reading (Bos et al., 2001; Cheesman et al., 2009; Foorman et al., 1998; Joshi, et al., 2009; Lyon & Weiser, 2009; Moats, 1994, 1995, 1999, 2009a, 2009b, Spear-Swerling & Brucker, 2004; Walsh et al., 2006). Educators are not able to provide appropriate instruction on content which they have not had adequate exposure to. Schools of education are severely condemned in many of these works for their part in contributing to the trend toward a failure in reading instruction in the United States. If the intent is to improve the ability

of teacher candidates to provide reading instruction, we must begin with schools of education programs relating to reading instruction.

To better align instruction to scientifically based reading research, education programs need to engage in professional conversations targeted at growth rather than punishment. The discourse teacher educators engage in within institutes of higher education and about these institutes needs to improve. Educators at these institutions are often entrenched in whole language, thus making the shift to scientifically based reading research that much more challenging and personal. The goal is to not affront these educators, but rather to collaborate and educate for the betterment of our preservice teachers and ultimately, their future students. In practical application, this resembles professional conversations around personal beliefs versus scientific evidence. The objective would be for all professionals, including policy-makers and the media, to abandon attributing reading failure to just one group or party and accept responsibility as a collective society. The days of blaming institutes of higher education must end and the era of partnership must begin.

The second tier of this problem-solving process is the proposed development of a Higher Education Collaborative (HEC) in the Commonwealth of Pennsylvania. The establishment of the Pennsylvania HEC would ensure the successful implementation of scientifically based reading research into preservice teacher education programs across the commonwealth. Texas established a similar approach, the Texas Reading First Higher Education Collaborative, in 2000 funded by the Texas Education Agency's Reading First initiative (Joshi et al., 2009). Through partnerships, the Texas HEC offers professional development and support to teacher educators in the state on the principles of scientifically based reading instruction. Faculty members teaching reading in undergraduate, graduate, post-baccalaureate programs, and community colleges receive professional development on reading and reading acquisition, with community support to assist in the transfer of such knowledge to preservice teachers (Joshi et al., 2009). This research study is advocating for a similar approach.

In Pennsylvania, a HEC would permit those universities and colleges electing to participate to join other teacher educators in aligning efforts to the empirical findings of the NRP and the convergence of evidence around reading and reading instruction. The alignment would include the modification of course syllabi, expectations, and assessments. Within this study, the majority of reading course content is sprinkled with scientifically based reading research but overwhelmingly populated with whole language-based learning. Through a Pennsylvania HEC, teacher educators could work together to adjust course syllabi to reflect the five components of reading and evidence-based practices for a more effective reading model. Modifications to course content would lead to appropriate instructional time being allocated for these components and practices rather than to practices regarded as non-evidence based and ineffective.

The third tier goes beyond institutes of higher education. In order to obtain a Pre-Kindergarten to grade four teaching certification in Pennsylvania, a teacher candidate must successfully pass the state licensure assessment. Licensure assessments reflect what is taught in education programs. If the intent is to align instruction with the science of reading to obtain positive student outcomes in reading, we must also align the state examination to this purpose. An analysis of 13 state licensure exams demonstrated a large variance in the importance placed on the alphabetic principle and the exposure to key areas of reading (Stotsky, 2009).

Pennsylvania was not included in this particular study however, the commonwealth uses the PRAXIS I and II exams from the Educational Testing Service (ETS) which were evaluated in the above mentioned study. Better alignment of licensure exams to scientifically based practices ensures teacher candidates are not entering a classroom without the necessary foundational knowledge and skillset needed to instruct future learners. With the Knowledge and Practice Standards (IDA, 2018) in hand, state teacher exams would be more effective in assessing preservice teacher knowledge of the structure of the English language and how to provide evidence-based reading instruction.

The fourth and final suggested tier includes professional development provided to in-service teachers. Many of those currently teaching have graduated from education programs that may not have adequately prepared them for the challenging task of teaching children to read. The responsibility to improve this preparation now falls to the school districts that hired these individuals. Recognizing that schools of education may not have offered preservice teachers the opportunity to acquire essential skills, professional development opportunities such as Language Essentials for Teachers of Reading and Spelling (LETRS) would provide such knowledge base. LETRS is a professional development solution providing educators with the skills they need to master the fundamentals of reading instruction addressing all five pillars as identified by the NRP. To enhance the knowledge and skillset of in-service teachers, a large-scale commitment to scientifically based reading instruction needs to be the focus of professional development for all PreK-4 educators, schools, and districts.

Conclusion

Teacher candidates engaged in courses from the five participating education programs courses likely graduate with varying levels of proficiency and expertise as it relates to reading instruction. Among these education programs studied here, there is a lack of consistency in exposure of preservice teachers to the National Reading Panel's findings, how instructional time is allocated toward these findings, and the degree to which these education programs hold teacher candidates accountable for the knowledge and skill of delivering effective reading instruction. The question of why our children continue to demonstrate weak reading proficiency is partially answered by examining how we prepare our teachers to provide the necessary instruction needed to build such capacity. For these five education programs, the standards they hold preservice teachers accountable to do not meet the standards necessary of developing proficient readers.

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Preparing for Learning and Teaching: Incorporating UDL and Mindset into Teacher Preparation Programs

Amber L. Gentile

Abstract: This conceptual article highlights the use of instructional practices based on the Universal Design for Learning framework and a focus on promoting effective mindsets in two teacher preparation courses (Classroom Management and Introduction to Developmental Psychology & Learning Theory). These practices have anecdotally demonstrated potential to promote students' understanding and practices in both learning and teaching. A review of research and personal experience as a K-12 teacher, administrator, and teacher educator in a university-based teacher preparation program guided this work.

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Introduction

Teacher educators have been working to address the challenges of the diverse needs reflected in classrooms in order to best prepare future teachers. Given that instructors play a critical role in the learning experiences of their students and this in turn strongly relates to academic achievement (Darling-Hammond, 2006), teacher preparation programs must continue to explore ways to address learner variance and prepare our pre-service teachers to meet the holistic needs of K-12 students (academic, social, emotional, and cultural). Inclusive strategies that focus attention to one's own learning and mindset to assist in drawing meaning from instructional practices can help with this preparation. The purpose of this conceptual article is to highlight the use of the Universal Design for Learning (UDL) framework (CAST, 2018; Grant & Perez, 2018; Meyer et al., 2014) with a focus on promoting effective mindsets in two teacher preparation courses (Classroom Management and Introduction to Developmental Psychology & Learning Theory). These instructional practices have anecdotally revealed potential increases in students' understanding and practices in both learning and teaching. A review of research and personal experience as a K-12 teacher, administrator, and teacher educator in a university-based teacher preparation program guided this work.

The practices used in the two courses has developed over several years and are based on the research-based framework of Universal Design for Learning (UDL) with deliberate incorporation of effective Mindset strategies and curriculum to meet the holistic needs of students. The goal has been to intentionally use these instructional practices to build relationships between students and educators, developing expert learners while increasing student achievement, and creating a community of learners where everyone feels safe, valued, and empowered (intellectually, socially, and emotionally) in order to be best prepared to serve as effective teachers. Based on anecdotal feedback (student academic performance, student comments, and instructor evaluation reports), experiential outcomes (when utilized in courses and professional development sessions), and observational data, these practices have been enhancing the learning experiences and preparation of pre-service teachers. It is intended that pre-service teachers will thus be prepared to use these practices within their own K-12 classrooms to the benefit of their future students.

Ensuring that teacher preparation programs have a holistic approach including deliberate instruction in mindset while utilizing UDL with an emphasis on removing barriers to learning, providing choice, promoting social emotional learning, and offering multiple pathways to learning can be beneficial. Instructional techniques and strategies are critical, however so are the overall belief systems of the pre-service teachers. Teachers have an important influence over the way students think about their self-efficacy (Stuart & Thurlow, 2000). The approach they have with students and the way they word and provide feedback can be impactful (Yeager, et al., 2014). Similarly, teachers need to know and believe that all students can learn and that they can teach all students. They must be willing to go through the struggle of figuring out the approach and strategies that work for their individual students. Conveying a mindset that highly values challenges, effort, perseverance, and mistakes is an important aspect of teaching that should be modelled and included in teacher preparation curriculum. Pre-service teachers will benefit from these instructional practices as students and by receiving the training to implement them in their own future K-12 classrooms. These deliberate and intentional instructional techniques should

enhance the learning experience of all learners.

The Role of UDL in Teacher Preparation

Universal Design for Learning is a framework that designs curricular materials and activities for teaching, learning, assessment, and curriculum to have the flexibility to match learner strength and needs so they can reach their learning goals. As defined by CAST (a nonprofit research and development organization that works to expand learning opportunities for all individuals through Universal Design for Learning), "Universal Design for Learning (UDL) is a research-based set of principles to guide the design of learning environments that are accessible and effective for all" (CAST, 2018). It includes guidelines for identifying specific, evidence-based options in designing instruction while removing potential barriers to learning. Many findings in brain-based research such as multiple intelligences, learning styles, and differentiated instruction are reflected in the UDL framework. CAST (2018) recommends a three-part framework for how the brain works using the three separate networks of the brain that are interconnected in the learning process.

The first part of the UDL framework is the *recognition network*, which identifies patterns in the brain and is considered the "what" of learning. The *strategic network* constructs personal meaning to information and sorts/classifies it. It involves metacognition or "thinking about your thinking" and is considered the "how" of learning. The *affective systems* consider the engagement or social interaction of the learner and involves the emotional system responsible for long-term memory, making connections between emotions, and cognitive learning and memory. It drives attention (which drives meaning and memory) and requires engagement to make learning meaningful and for it to be internalized. It is considered the "why" of learning. These networks are used in the three essential qualities of UDL that must be considered when designing curriculum to meet the needs of all learners: Representation, Engagement, and Action and Expression (CAST, 2018; Meyer et al., 2014). Preservice teachers can benefit from reflecting on their own thinking and learning experiences and how these experiences may influence their instructional practices.

Representation involves providing students in a variety of ways to receive and interpret information. Oral presentation, watching a video, reading text, attending a field trip, using technology, and/or involvement in a role-play are a few examples. Intentional use of the course Learning Management System (LMS) in providing choice and multiple pathways to content has helped students to organize and interact with materials in various formats.

Engagement involves knowing students so that their interests can be matched to their learnings. Examples of engagement processes include purposeful use of technology, highlighting, listening, using manipulatives, and participating in discussion groups. Creating assignments that help students to make the connection between their own learning preferences and struggles can highlight considerations that will need to be made in their own instructional planning.

Action and Expression accommodates the strategic and motor systems by reflecting on different ways students may respond using the information they have received (CAST, 2018; Meyer et al., 2014). Poster presentations, oral or written reports, demonstrations, productions, and technology use are some examples of ways for students to express their understanding.

Classes designed using UDL provide students with multiple means of representation to gain information, multiple means to engage and motivate students, and multiple

ways to demonstrate what they have learned (CAST, 2018; Grant & Perez, 2018; Meyer et al., 2014; Orkwis & McLane, 1998). For example, for assignments that are not measuring writing outcomes, it can be beneficial to allow students choice in how they demonstrate their learning. Accepting reflections through oral recordings, videotape recordings, or presentation documents can allow students to express their understanding more freely. Students have shared that having these options helps lower their anxiety about assignments, builds their confidence in their work, and empowers them to experience deeper learning.

Along with the described practices, lessons within the two courses encourage students to recognize the impact of UDL on their learning experiences and challenge them to reflect on ways it can be used in their classroom management and instructional practices. Students are expected to identify barriers that may exist in lessons and use the UDL framework to help remove them. Assignments require thoughtful and strategic use of methods that will address the holistic needs of students and encourage multiple pathways to reaching learning objectives.

UDL is an important part of instruction in that it utilizes brain-based practices as well as honors choice and multiple pathways to learning outcomes to meet diverse learning needs. However, it cannot standalone. Pre-service teachers must also deliberately consider mindset and its role in learning and teaching. Without utilizing an effective Mindset for themselves as learners, students may not be fully benefitting from the learning, which limits the potential of the UDL framework.

The Role of Mindset in Teacher Preparation

Mindset, for the purposes of this article, refers to more than the growth vs fixed mindset described by Carol Dweck (2006). She emphasized the underlying beliefs people have about abilities and intelligence as well as the profound impact it can have on behavior. According to Dweck, those with a growth mindset recognize that mistakes are part of learning, effort is necessary, and that deficiencies can be overcome; whereas those with a fixed mindset believe that failure is a reflection of ability and a need for effort or apparent deficiencies reflect ability.

Mindset included in the described approach, which is based on this author's experience and review of research, also includes the attitudes, belief systems, perceptions, relationships, dispositions, and approaches demonstrated by students and teachers. Student mindset involves the conscious and unconscious beliefs students hold about their ability to learn and to master challenging concepts as well as the beliefs they perceive others hold about them. Teacher mindset involves the conscious and unconscious beliefs the teacher has about their students' ability to learn as well as about their ability to reach and teach their students.

Included in this concept of mindset are being trauma informed, culturally responsive, and sensitive to the social emotional needs of students. As indicated by the Institute on Trauma and Trauma Informed Care (2015), teachers must approach students and their behaviors from a place of curiosity and compassion, rather than from a place of judgement of character. They must understand the impact of trauma on the individual and be careful not to re-traumatize. Modelling and teaching pre-service teachers' self-regulation and other social emotional strategies is a key aspect of the proposed practices with the purpose of empowering them to self-regulate and to be prepared to assist their future students as well.

Students need to be in a regulated state and feel safe and empowered in order to maximize learning. Mindset is a critical piece of teacher preparation because it has a powerful influence on how well we do a given task. It also influences attitudes and the quality of the critical teacher-student relationship.

These mindsets are influential to instructional practices used by teachers and learning outcomes demonstrated by students (Stuart & Thurow, 2000). Therefore, pre-service teachers should be taught about mindsets and their impact on learning. Giving students specific opportunities to reflect on their belief systems and to be aware of struggle and mistakes as a part of the learning process is important as is sharing strategies to promote effective mindsets in their students. For example, pre-service teachers can be taught about process praise (versus outcome praise) and how to help students identify the strategies that lead to success.

There are neurological underpinnings to mindset, which show that our beliefs can physically change our brain networks (Murphy et al., 2015). Beliefs influence whether our brains continue to work on developing new pathways (believing they are capable of the learning or completing the task) or whether they stop the process (by believing they are not able to learn or complete a task). Helping students to understand their brains' capacity to change due to the learning process and providing them with learning strategies can empower learners. Teaching about mindset and how the brain works can increase motivation, improve self-regulated learning, reduce anxiety when learning, improve academic performance, and increase enjoyment in learning (Hattie & Anderman, 2020; Mesler et al., 2021).

How feedback is phrased, praising process rather than product, and teaching students how to reach high standards makes a difference. Small interventions in mindset have shown great benefits. For example, there have been seminal studies that demonstrated that changing just one line of feedback from product oriented ("you must be very smart") to process oriented ("you must have worked really hard") influences students' performance and willingness to engage in difficult tasks (Dweck & Legget, 1988). Similarly, another study demonstrated that the teacher indicating his belief in the students with one line ("I'm giving you this feedback because I have high expectations of you and I know you can achieve them") had similar positive performance outcomes (Yeager, et al., 2014). These findings have been consistent with the feedback received from pre-service teachers in the courses in which the described practices have been applied.

Furthermore, teachers need to be aware of their own mindsets and the influence they can have on students' mindsets. Specific to growth vs fixed mindsets, research has shown that teachers with a fixed mindset perceive students who struggle as not sufficiently bright, talented, or smart in the subject. Low achievers in classrooms of teachers with a Fixed Mindset left as low achievers at the end of the school year (Rheinberg, 2001; Mesler et al., 2021). Teachers with a growth mindset perceive struggling students as a challenge – learners who need feedback and guidance on how to improve. Low achievers in classrooms of teachers with a growth mindset moved up and became moderate, and in some cases, high achievers (Rheinberg, 2001; Mesler et al., 2021).

For this reason, it is very important for teachers to be aware of their feelings and thoughts about teaching and about the students they teach. Faculty in teacher preparation programs, therefore, need to model these practices and teach this described concept of mindset to the pre-service teachers. Teacher attitudes as well as the teacher-

student relationship are a critical piece to learning. The best instructional strategies will not be maximized without them and therefore, must be explicitly addressed. These concepts have been explicitly taught and are embedded throughout the two courses. Students have indicated an understanding and appreciation of them in their own learning experiences. Furthermore, the students have shared a commitment to utilizing them in their future classrooms.

Using UDL and Mindsets Focused on Learning and Teaching

To use UDL and mindsets effectively, each stage of the curricular and instructional design – including planning, implementation, assessment, and reflection- has been carefully considered. First and foremost, the language used in course syllabi is deliberate and intentional in using growth and strength-oriented language. Conveying a belief in the intentions and capability of the learner through the wording in the syllabi sets the stage of high expectations with ongoing support rather than a focus on consequences and deficit-based language. The focus is on the competencies that will be built and ways to ensure success, rather than on consequences for falling short of expectations. For example, the following statement is used as an introduction to the syllabi:

> *Please treat this syllabus as a guide to your success. In this course, we will work together and discuss tools to strengthen our ability as teachers as well as our overall intellectual ability, problem solving skills, and critical thinking as learners. Using the course content and teaching and learning strategies, we will practice to become more aware and stronger as individuals, students, and teachers toward solving real life problems. My hope is that the course will be a shared joyful and rewarding learning experience full of challenge and growth. My role here is as a facilitator during this journey of academic and professional growth, to which I am fully committed. You are the real players. By putting forth your best, purposeful effort through the use of learning strategies, you will succeed!*

Time is also spent promoting effective mindsets and building community within the classes to help ensure that each learner feels safe (physically, cognitively, emotionally, and socially) and to help teachers create a social-emotional partnership with students that leverages deeper learning and trust to help students rise to higher expectations. Students need to be in a holistically good productive state for learning which includes a willingness to take risk and go beyond their comfort zones (where growth can occur). The pre-service teachers are asked to note how the mindset and community building experiences influence their learning and are provided with strategies to use in their future classrooms. The importance of ensuring positive teacher-student relationships is emphasized, as is the need for constant communication. Students are encouraged to communicate with the instructor so they can be partners in the learning experience. High expectations denote a belief in the capabilities of the learners but are also backed up by a commitment in providing support.

Consideration of each brain network and the three essential qualities within the framework of UDL is essential while planning courses and individual lessons in order to remove potential barriers to learning and to empower the students as learners. Understanding the barriers that may exist for each learner requires an awareness and mindset

that not only offers choice during learning, but also focuses on getting to know the students and honoring them within each of their own contexts; a critical aspect to being culturally responsive and trauma informed. It has been noted by students that they appreciate knowing what to expect when they come to class. Each class is started with an opportunity for students to share their recent experiences, feelings, and concerns. Students are encouraged to ask questions and to express themselves freely so that they are in a good emotional and cognitive place in which to learn. They are also presented with a clear agenda noting the objectives and activities for the class period. Students are given the opportunity to ask for clarifications or to note any concerns about the structure of the lesson. Students have shared informally and in evaluation reports that they looked forward to coming to class because they knew their needs would be addressed and they would be given the opportunity to prepare for learning.

Similarly, it is essential that educators consciously reflect on their own mindset regarding their belief systems and expectations for themselves and for their students (Stuart & Thurow, 2000). Therefore, faculty in teacher preparation programs not only need to model this practice, but also explicitly teach their students strategies for doing so. It is important that teachers believe in students' ability to learn and in their ability to teach all students. Through reflection, teachers can internalize a growth mindset and model it in ways such as pushing through "fear of failure" and promoting ongoing growth and improvement. Mindset should be a deliberate part of lesson planning and reflection through consciously checking one's belief systems and using a growth-oriented focus. Pre-service teachers should be taught ways to incorporate growth mindsets so that they have the resources and understanding to use it effectively in their classrooms. This should be used to empower people with knowing that they can develop their own potential by persevering through challenges.

Each lesson prepared for pre-service teachers must be thoughtfully designed and provided in a manner that demonstrates the practices and instructs the students in how to use it themselves – as learners and as future educators. These practices are rooted in the explicit utilization of instructional strategies at each phase of instructional design, delivery, assessment, and reflection that helps the students enhance their learning and provides them with instructional approaches to use in their future classrooms. It includes the building of genuine and positive teacher-student relationships that promote the learning of all and bring these deliberate actions to the awareness of pre-service teachers as they are experiencing it as learners.

Example of a Typical Class Session

As noted earlier, each class begins with an informal "check-in" with students. It is a time when students are asked to reflect on their mindsets and to share any concerns and/or ask questions in order to ready themselves for the learning process. Sometimes a quote relevant to the objective or a question about a current event will also be used to prompt their thinking and orient them to relevant topics for the lesson. An agenda is shared verbally and visually with the students so that they know what to expect during the class session. Similarly, the objective is explicitly shared to demonstrate that there is a clear purpose and specific outcome intended. Students are asked to reflect on the previous lesson and how it may connect with the current objective to activate prior knowledge. Content is shared through multiple delivery methods including, at a minimum, a PowerPoint presentation and captioned videos followed by small group

learning activities in which the students collaborate to use the new information. Everything used in the class is also available in the learning management system along with additional resources for students to explore. The end of the class is used for students to reflect on the following: their progress toward the learning objective, their ability to summarize the key takeaways from the lesson, their experience as learners, and how the experience may influence their future instructional practices. Students are often provided prompts such as "why do you think we did this activity today?" or "what did today's lesson mean to you as a learner and/or as a future teacher?"

Assignments in the courses include options in how they express their understanding and the meeting of the outcomes. They also include student reflections on their learning experience, the meaning they drew from them, and the connections they made to the overall teaching and learning process.

Conclusion

Given that faculty play a critical role in the learning experiences and academic achievement of students, teacher preparation programs recognize the need to address the holistic needs of our students and to prepare our pre-service teachers to meet those needs of students in K-12 classrooms. Deliberate inclusion of the UDL framework and mindset into teacher preparation curriculum and the intentional use of instructional strategies that focus on removing barriers to learning, providing choice and multiple pathways to learning, and promoting effective mindsets and social emotional learning has the potential to benefit pre-service teachers holistically as learners. Additionally, receiving intentional training in these practices provide them with strategies to utilize in their future K-12 classrooms in order to benefit their future students.

Anecdotal feedback and personal experience has shown this approach to have great promise in addressing the holistic needs of learners. Research deliberately focused on utilizing these instructional strategies based on the UDL framework while teaching and promoting effective mindsets is still needed. The more we can learn about purposefully and effectively implementing these practices, the better prepared teacher education faculty will be to implement them in their classrooms to benefit their students as learners and, ultimately, to train and bring the instructional awareness to pre-service teachers.

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Preservice Teacher Curricula Should Include Research on Non-Cognitive Characteristics

Victoria A. Jones

Abstract: Institutions of higher education need to provide curricula for preservice teachers on the importance of non-cognitive characteristics related to success to best prepare and maintain new teachers in K-12 schools throughout the country. Many educators of preservice teachers experienced the importance of curricula that psychologically and emotionally prepares future educators for crippling events, before, during, and after the onset of the coronavirus pandemic. Crises of all types are inevitable within society and schools, and how they are handled by educators will vary based upon educators' non-cognitive characteristics. While societal upheaval can negatively impact schools, faculty, and students by adding stress and uncertainty to the day-to-day work of educators, coping mechanisms such as resilience, grit and self-efficacy can prevent consequences such as teacher burnout and attrition. Consequently, preservice teachers will benefit by accumulating knowledge about the power and importance of these types of non-cognitive characteristics before they enter the field.

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Preservice Teacher Curricula Should Include Research on Non-Cognitive Characteristics

As an educator of preservice teachers at a private university in Pennsylvania it became apparent to me during the 2020-2021 school year how important it is for institutions of higher education to psychologically and emotionally prepare future educators for potentially devastating events, such as the coronavirus pandemic. Crises of all types are inevitable but how they are handled by educators will vary based upon educators' non-cognitive characteristics. While crises can negatively impact schools, faculty and students by adding stress and uncertainty to the day to day work of educators, coping mechanisms such as resilience, grit and self-efficacy can prevent consequences such as teacher burnout and attrition. Consequently, preservice teachers will benefit by accumulating knowledge about the power and importance of these characteristics before they enter the field.

At the time of this paper (summer 2021), teachers and administrators across the globe are developing plans to address the repercussions of the coronavirus pandemic on schools and students. Unfortunately, a significant number of teachers are also considering early retirement or new careers outside of education (Hess, 2020). As reported by Lavery (2020) researchers from Brown University analyzed data from fall 2019 to spring 2020 to gauge teachers' reactions to the pandemic and its repercussions. Teachers from nine states expressed a "damaged sense of self-efficacy," (Lavery, 2020), and an "*Education Week* survey in August noted declines in teacher morale and an increased likelihood of teacher resignation" (Lavery, 2020). For the aforementioned reasons, competent, confident, and motivated new educators are essential for addressing gaps in student learning. Infusing preservice teacher curricula with information regarding non-cognitive characteristics has the potential to better prepare preservice teachers for twenty-first century classrooms.

Effective Teachers

Research shows that effective teachers have a significant impact on student academic achievement (Sautelle, et al., 2015; Schumacher, et al., 2015). Academic achievement can be measured in a variety of ways including national academic assessments such as the National Assessment of Educational Progress (NAEP), high school graduation rates, narrowing of documented achievement gaps, high stakes state assessment data, and student academic growth data (Deming & Figlio, 2016). Hiring newly graduated educators who are aware of their own and consequently their students' academic and social and emotional needs could enhance student achievement (Sautelle, et al., 2015; Schumacher, et al., 2015) and eliminate documented repercussions of teachers leaving their careers earlier than expected such as organizational disruption (Zhang & Zeller, 2016) and detrimental expenses (Carver-Thomas & Darling-Hammond, 2017).

Challenges faced by teachers pre-coronavirus pandemic included: feelings of isolation (Moore, et al., 2016), increasing numbers of students with diverse and complex needs (Ingersoll, et al., 2016), minimal teacher support systems (Silva, et al., 2014), lack of teacher autonomy (Ingersoll et al., 2016), resource shortages (Sutcher, et al., 2016), pressure related to high stakes testing (Danielson, 2016; Theirs, 2016), and difficult teaching assignments (Ronfeldt et al., 2013). The pandemic has added additional stress to the daily lives of both in-service and preservice educators (Lavery, 2020) making coping mechanisms valuable

personal assets (Centers for Disease Control and Prevention, 2021).

Non-Cognitive Characteristics

Non-cognitive characteristics are often defined in the current literature as competencies (Stecher & Hamilton, 2014), qualities (Hoerr, 2017), factors (Ghasemi, 2017), psychological constructs (Sautelle et al., 2015), traits (Perkins-Gough, 2013), and attributes (Eng, 2015; Petway, et al., 2016) that can potentially lead to positive outcomes. For the purposes of this research, non-cognitive characteristics will refer to personal resources, such as resilience, grit, and self-efficacy that are linked to performance (Credé et al., 2017; Khine & Areepattamannil, 2016).

Research exists regarding the importance of non-cognitive characteristics related to twenty-first century career success (Arnup & Bowles, 2016; Duckworth & Gross, 2014; Gray & Manahan, 2017; Richards et al., 2016; Robertson-Kraft & Duckworth, 2014; Perkins-Gough, 2013; Schwarzer & Hallum, 2008; Stecher & Hamilton, 2014; Stephanou et al., 2013). Previous quantitative research indicates that non-cognitive characteristics can play a role on teacher's longevity and effectiveness (Arnup & Bowles, 2016; Duckworth & Gross, 2014; Gray & Manahan, 2017; Richards et al., 2016; Robertson-Kraft & Duckworth, 2014; Schwarzer & Hallum, 2008; Stecher & Hamilton, 2014; Stephanou et al., 2013; Perkins-Gough, 2013). Taylor (2013), Durham Barnes (2011), Milner (2002), and Milner & Hoy (2003) have also conducted qualitative research regarding the benefits of teachers' non-cognitive characteristics related to longevity and effectiveness.

Eng (2015) called for 21st century schools to approach reform efforts that align with twenty-first century themes associated with success, including non-cognitive characteristics. Eng (2015) further explained that traditional measures of success are inadequate for the 21st century because they neglect real world skills and are counterproductive for innovation and entrepreneurialism. School reform efforts, including highly qualified teachers for all students, are unlikely without attention to non-cognitive characteristics that enable school policies to align with institutional innovation (Eng, 2015).

Recently, educational researchers have responded to such research by studying non-cognitive characteristics that may be related to teacher retention and effectiveness (Duckworth, 2016; Goertzen & Whitaker, 2015; Hoerr, 2017; Khine & Areepattamannil, 2016; Stecher & Hamilton, 2014). In their study of non-cognitive characteristics linked to success, Goertzen and Whitaker (2015) explain that, due to constant change in the current workforce, it is time for employees to focus less on what one knows and more on who one is and who one is becoming. In education systems, problems have the potential to be solved with a shift of focus from what we know to who we are (Hoerr, 2017), and this is something preservice educators will benefit from exploring alongside thoughtful and informed professors. Institutions of higher education will most effectively prepare pre-service teachers if they ensure that curriculum includes information about the importance of non-cognitive characteristics while still addressing research-based content and pedagogy. This type of multi-faceted curriculum has the potential to guide future practitioners and their students towards fulfilling their own academic, social, and emotional potentials.

Preparing Tomorrow's Teachers

Before the coronavirus pandemic, teachers reported leaving the profession due to limited teacher autonomy; daily struggles

including: difficult students, limited resources, non-existent support systems, lack of planning time and even fears of violence (Rutkowski & Engel, 2013). "But regardless of the reason, none of these departures are cost free" (Ingersoll, et al., 2016, p. 45) to the school systems or individuals. To make sure that every classroom is equipped with quality educators, school districts need to hire new teachers who are most likely to grow and adapt over time as they gain experiences that equip them for successfully moving individual students, groups of students, and organizations forward.

Ronfeldt et al. (2013) found that even when teachers are replaced with others who are identified as equally qualified, the impact on the school or organization as a whole is disrupted and student achievement is still negatively impacted. The coronavirus pandemic illustrated to school stakeholders how important it is that new teachers are prepared to stay at schools for extended time frames to eliminate learning gaps for all students negatively impacted by the pandemic or other societal concerns. New teachers who are aware of non-cognitive characteristics, such as resiliency, grit, and self-efficacy will be better able to cope with challenges and consequently more prepared to meet the needs of diverse student bodies.

Consideration of Past, Present and Future Means to Teacher Certification

Since the 1800s, teachers have faced prerequisites for entry into the profession. "In 1834, Pennsylvania became the first state to require prospective teachers to pass an exam focusing on reading, writing, and math" (Allen & Kelly, 2015). Today, the most widely used exam for teacher certification is the Praxis exam. Forty-six states currently require one or more forms of the exam for certification, and the remaining states have alternative assessments or measures (Educational Testing Services, n.d.). States have different cut scores and requirements for various certifications, but these assessments only measure content knowledge and pedagogy. Current research discusses reasons why new certification considerations are needed:

> The call for measures of interpersonal and intrapersonal competencies is motivated by two recent developments. First, states nationwide are currently implementing systemic reform of their academic standards, with the intention of raising the overall economic and civic capacity of the next generation of U.S. students. Second, new research documents the relationships between academic performance, subsequent career success, and civic engagement on the one hand, and interpersonal and intrapersonal competencies on the other. (Stecher & Hamilton, 2014, p. 5)

The diversity of 21st century learning environments may be the catalyst that demands new ideas on what makes an effective teacher. Research indicates that personal characteristics of educators correlate with teacher effectiveness (Arnup & Bowles, 2016; Duckworth & Gross, 2014; Gray & Manahan, 2017; Richards et al., 2016; Robertson-Kraft & Duckworth, 2014; Schwarzer & Hallum, 2008; Stecher & Hamilton, 2014; Stephanou et al., 2013; Perkins-Gough, 2013), but identifying personal resources using standardized assessments is challenging. When commenting on the newest certification tests for educators, Delpit, a professor of education at Southern University in Louisiana, explains that examining teacher characteristics is another option for ascertaining whether or not preservice teachers are ready to enter the field (Delpit, 2006).

Delpit (2006) believes that instead of adding another test, the profession should reconsider its metrics. To prepare teachers to be successful in schools with a wide variety

of students it would benefit the profession to look at characteristics of teachers who excel at what they do and find ways to instill those qualities in incoming teachers (Barmore, 2016). Additional, qualitative research focused on effective educators could provide additional information.

In an effort to inform and improve the selection of candidates for teacher preparation programs in Australia, Sautelle et al., (2015) studied the value teachers and non-teachers put on six constructs identified in past research as indicators of teacher effectiveness. The constructs included extraversion, agreeableness, conscientiousness, resilience, self-regulation, and cognitive ability. The authors concluded that participants valued cognitive ability as the greatest indicator of teacher effectiveness, but that the other five attributes are also perceived as necessary for teachers entering preparatory programs.

Resilience, Grit and Teacher Efficacy

Resilience, a process where individuals faced with adverse and/or challenging situations utilize personal resources to positively adapt (Graber, et al., 2015); grit, a "perseverance and passion for long-term goals" (Duckworth et al., 2007, p. 1087); and teacher efficacy, a teacher's beliefs in his or her "capacity to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3) are three personal resources that will be discussed as important concepts for preservice teacher curricula.

Resilience

Goertzen and Whitaker (2015) credit resiliency as a malleable capacity essential for success in the 21st century workplace. The authors explain that today's work environments are constantly changing, and change has the potential to cause anxiety for today's employees (Goertzen & Whitaker, 2015). Anxiety can cause a negative chain reaction and impede enjoyment, and consequently progress (Richards et al., 2016). Enhancing the resilience of current and future workforces has the potential to enhance employee and organizational outcomes (Goertzen & Whitaker, 2015).

Researchers of psychiatry, psychology, human development, medicine, epidemiology, and social sciences have examined resilience and its impact on individuals and groups for decades (Ledesma, 2014). Definitions of resilience in the literature are not consistent. In a study focused on promoting resilience, Meredith et al., (2011) found over 100 definitions of the term. Britt et al., (2016) synthesized the findings of Meredith et al., (2011) into 10 representative definitions that include an individual's internal capacity or ability to adapt or to exhibit growth in the face of adversity. Graber et al. (2015) explain, "a broad resilience framework focuses upon identification and promotion of strengths, social connections and capacities to enrich the story of human functioning across a wide range of fields" (p. 21).

Multiple factors, including individual, relationship, community, cultural, and environmental, contribute to a person's resilience (Mohanty, 2016). To succeed and thrive at work is dependent upon an individual's ability to utilize characteristics that lead to resilient actions within their environments (Kuntz, et al., 2017).

The fact that resilience is not a fixed characteristic and factors, such as support networks, can and do enhance resiliency (Arnup & Bowles, 2016; Ijadi-Maghsoodi et al., 2017; Ledesma, 2014), make the topic one of importance for educational leaders who are continuously looking for tools to enhance teacher retention and effectiveness. Several researchers have found that an individual's resilience can have a positive effect

on their career success and the success of the organization where they are employed (Ledesma, 2014; Ronfeldt et al., 2013; Sautelle et al., 2015; Taylor, 2013). The value of resiliency and related non-cognitive characteristics may be of significance if new teachers are to be effective and long lasting in today's schools.

Grit and Today's Schools

Although critics continue to question grit as a valid construct, districts and schools across the nation are paying attention to the idea of grit and the existence of other non-cognitive variables. The Roxbury Preparatory Charter School in Boston, Massachusetts is constantly seeking out new ways to help students persist during challenges (Seider, 2013).

> Roxbury Prep faculty members want students to take on the mindset that 'effort determines success.' By explicitly framing everything from nightly homework assignments to the Pi Recitation Contest through this lens, Roxbury Prep faculty seek to strengthen students' motivation and ability to do the hard work necessary to accomplish their goals (Seider, 2013, p. 29).

Another school, KIPP Delta, located in the second poorest county in the second poorest state, Arkansas, has produced impressive results on state assessments and students' growth data. KIPP Delta is part of a national chain of charter schools praised by educational reformers like Bill Gates. The school focuses on getting students into college, and continuously emphasizing the motto "work hard; be nice" (Seider, 2013, p. 56) to accomplish their mission. On their website, KIPP credits Duckworth as a contributor to their character curriculum (para. 2). Other schools are following KIPP's lead. Lyon (2014) conducted research with fifth grade students who were pre and post tested with Duckworth's grit survey. Lyon (2014) found that after one year of interventions designed to instill grit in students, the students did score higher on the post-grit assessment. Duckworth's research indicates that grit can and has been part of successful instructional intervention experiments that "target growth mindset–and that teach about the importance of certain study techniques, like deliberate practice" (Kamenetz, 2016, para. 30).

As school districts across the country begin to infuse the teaching of non-cognitive characteristics into curricula, it makes sense that hiring authorities consider teacher candidates who embody similar non-cognitive characteristics and institutions of higher education prepare student teachers appropriately.

Teacher Efficacy

Bandura explained efficacy as "beliefs in one's capacity to organize and execute the course of action required to produce given attainments" (1997, p. 3) Tschannen-Moran et al. (1998) clarified the idea by defining teacher efficacy as a "teacher's belief in his or her capability to organize and execute the courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 224). Since Bandura's work, multiple researchers have found perceived efficacy to be a characteristic that enhances instructor effectiveness (Guskey & Passaro, 1994; Perkins-Gough, 2013; Schwarzer & Hallum, 2008; Tschannen-Moran et al., 1998).

The original concept of efficacy began with Rotter and his social learning theory on locus of control (Hodgkinson 1992; Tschannen-Moran & Woolfolk Hoy, 2001). Locus of control can be defined as a "belief individuals have about who controls the key events in their lives, themselves or various external factors such as other people, chance events, or the Government" (Hodgkinson,

1992, p. 311). In 1976, The Rand Corporation, motivated by Rotter's work, developed two questions to measure efficacy. The questions were created to discover beliefs about whether control over student motivation and performance lay within themselves or within the environment (Tschannen-Moran & Woolfolk-Hoy, 2001).

- "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment" and
- "If I try really hard, I can get through to even the most difficult or unmotivated students" (Tschannen-Moren et al., 1998)

Results indicate that teachers with a strong sense of efficacy exhibit more gains in student achievement and job satisfaction (Gurskey & Passaro, 1994; Schwarzer & Hallum, 2008; Stephanou, et al., 2013). Schwarzer & Hallum (2008) found that teacher efficacy is "a personal resource factor that may protect from the experience of job strain and, thus, make the escalation of burnout less likely" (p. 1). According to Schwarzer & Hallum (2008), self-efficacy influences motivation (p. 2). Because of this, people with high levels of self-efficacy are motivated to persist in more challenging tasks (Bandura, 1977; Schwarzer & Hallum, 2008).

In 2003, Milner and Hoy completed a case study of an experienced African American teacher with self-efficacy and persistence in a crisis or challenging situation. The authors found that Bandura's 1997 sources of efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states were evident in their main participant in the fact that she felt "physiological and emotional arousal that could have affected her self-efficacy and persistence" (p. 13). The main participant was the only African American teacher on a staff of 126 full-time educators. At the time, Milner (2002) called for more qualitative research to discover reasons why some teachers stay in the field and others leave. "...this study is important as we think about the retention of teachers across the country" (p. 34). More recently, Stephanou et al., (2013) utilized quantitative methods to study how teachers' individual and collective efficacy beliefs affected their job satisfaction. The authors used a sample group of 268 elementary teachers who completed self-efficacy scales. The results indicated that teachers' self-efficacy directly impacted collective efficacy, which in turn influenced job satisfaction.

Effective new teachers are critical if achievement gaps are to be eliminated and all students are going to be prepared for 21st century citizenship (Eng, 2015). Whether or not federal and state legislature over the past 50 years has positively impacted teachers and educational systems as a whole is a controversial and much debated topic (Danielson, 2016; Theirs, 2016; Ingersoll, et al., 2016). Certainly the Elementary and Secondary Education Act (ESEA), No Child Left Behind (NCLB) and the Every Student Succeeds Act (ESSA) all aimed to meet the needs of the nation's diverse student population by allotting provisions, including their definition of qualified teachers, that will equip all students with the resources necessary for higher education and/or career success. Unfortunately, the goal of an effective teacher, capable of adapting over time with an everchanging educational system and society, has not been fully realized and teacher shortages and attrition remain a concern for many schools (Birman et al., 2009).

Non-cognitive characteristics have been linked to career success (Arnup & Bowles, 2016; Duckworth & Gross, 2014; Gray & Manahan, 2017; Perkins-Gough, 2013; Richards et al., 2016; Robertson-Kraft & Duckworth, 2014; Stecher & Hamilton,

2014; Stephanou et al., 2013) but are challenging to measure with traditional assessments. Nonetheless, much attention has been given to non-cognitive characteristics as predictors of success in areas such as education, business, military, medicine, and psychology (Duckworth, 2016; Eng, 2015; Hoerr, 2017; Stecher & Hamilton, 2014). Non-cognitive characteristics or personal resources linked with performance (Credé et al., 2017; Khine & Areepattamanil, 2016) may be part of the reason some educators continue in their field while others leave earlier than expected to pursue alternate paths. Preservice teachers need to be aware of these resources to gain and give as much as possible within today's schools over extended periods of time.

Recommendations for Institutions of Higher Education

1. Preservice teacher coursework should provide students curricula regarding non-cognitive characteristics as tools for coping with challenging situations. This content can be imbedded into units of study where preservice teachers are discussing the importance of students having access to learning that addresses their own social and emotional well-being.
2. Preservice teacher coursework should provide students curricula regarding the power of positive relationships. This action could enhance relationships between colleagues and between teachers and students which could potentially lead to teacher longevity and effectiveness. This content can also be imbedded into units of study where preservice teachers are discussing the importance of students having access to learning that addresses their own social and emotional well-being.
3. Professors of preservice educators should collaborate with K-12 school administration to prepare new teachers by providing continuous information regarding non-cognitive characteristics related to successful and long-lasting teaching careers.

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Teacher Transformative SEL as a Foundation for Student Transformative SEL

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Abstract: Transformative social and emotional learning (Jagers et al., 2019), a form of social-emotional learning (SEL) specifically focused on equity, is an important part of student overall well-being and success. However, there is limited research on how to effectively prepare teachers to bring SEL to their classrooms, especially SEL grounded in social justice. In order to contribute to the growing field of teacher training in social-emotional learning, this qualitative study explores teacher perceptions of their own preparedness in this area. Findings reveal that teachers saw their *own* transformative SEL as a key factor in supporting *students'* transformative SEL, highlighting the importance of holistic teacher preparation that focuses on the social-emotional development of teachers themselves.

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Introduction

Social and emotional learning (SEL) is widely recognized as an integral part of student overall well-being and success (CASEL, 2021; Durlak et al., 2011; Immordino-Yang et al., 2018; Jones & Kahn, 2017; Mahoney et al., 2018; PA School Safety Report, 2018). Importantly, there is also a growing call to recognize the importance of implementing SEL with a culturally-sustaining, equity lens (Kaler-Jones, 2020; Kirshner, 2015; Love, 2019; Niemi, 2020; Rose, 2013; Seider & Graves, 2020; Simmons, 2019, 2021; Soutter, 2019, 2020). That is, despite the existing research on SEL, questions have been raised about who benefits from such efforts and how approaches can be shifted to support all student identities (Farrington, 2020; Steele & Cohn-Vargas, 2013). For example, instead of envisioning SEL as solely an individualistic endeavor or one that aims to "fix" students or enforce compliance, educators are advocating for SEL initiatives that are consistent with the National Equity Project's (2021) definition of equity ("each child receives what they need to develop to their full academic and social potential"), and Paris & Alim's (2017) conceptualization of culturally sustaining pedagogies which "seeks to perpetuate and foster—to sustain—linguistic, literate, and cultural pluralism as part of schooling for positive social transformation" (p. 1).

However, there is limited research on the best ways to prepare teachers to foster SEL – particularly SEL grounded in equity – in the classroom (Niemi & Weissberg, 2017; Schonert-Reichl et al., 2017; White et al., 2020). For example, a recent national exploration of teacher preparation for social and emotional learning (Schonert-Reichl et al., 2017) reported that SEL is given little attention in required courses in colleges of education in the U.S., leaving teachers largely to figure this component out by themselves. This kind of limited teacher training can lead to intermittent and ineffective SEL practices in schools (Durlak, 2016; Niemi & Weissberg, 2017). In addition, research has shown that many teachers (especially White teachers) enter the field with limited cultural knowledge (Sleeter, 2008), lack of awareness of systemic inequality (Picower, 2009), and a deficit approach (Cruz et al., 2014, Donahoe-Keegan et al., 2019) that can be harmful to students. Indeed, one of Schonert-Reichl et al.'s (2017) primary recommendations from their comprehensive report is to advance research that examines the impact of promoting teachers' SEL in teacher prep programs on both teacher well-being and student social-emotional growth and wellness.

In order to contribute to this call and to the growing field of teacher training in social-emotional learning, this research seeks to answer the following question: What are teacher perceptions of effective practices in preparing teachers to foster SEL in their classrooms?

Our data reveal that teachers saw their own social-emotional learning as one key factor in supporting students. More specifically, the ways they spoke about their own SEL was aligned with Jagers et al.'s (2019) conceptualization of *transformative* SEL, a form of SEL specifically focused on social justice. The purpose of this paper is to illustrate the ways in which transformative SEL for teachers can be built as a foundation for fostering equity-grounded social-emotional learning for students themselves.

Transformative Social and Emotional Learning

Transformative Social and Emotional Learning (Jagers et al., 2019) is a form of SEL that upholds a vision of social justice and equity as its primary aim. While the Collaborative for Academic and Social

Emotional Learning (CASEL) relies on five central pillars to define SEL (*self-awareness, self-management, social-awareness, relationship skills,* and *responsible decision-making),* Jagers et al. (2019) parse each of these competencies into three tiers: *personally responsible* (a responsible citizen who contributes to one's community), *participatory* (one who is more actively involved in service and activism), and *transformative* (one who critically analyzes inequality and seeks collective well-being and social justice). Thus, while the transformative tier of each competency is aligned with each of CASEL's definitions, Jagers et al. (2019) push the goals of SEL to be more equitable, critical, and collectivistic. For example, Jagers et al. (2019) define ***transformative self-awareness*** as being comprised of certain key indicators that transcend an individualistic vision of this competency; instead of just working to build awareness of one's own strengths and weaknesses, they advocate building a critical self-awareness that includes examining one's biases and privileges and their impact on others. Similarly, ***transformative self-management*** moves beyond managing one's own emotions alone toward building cultural humility as one way of understanding how to cope within the context of others. Jagers et al.'s (2019) conceptualization of ***transformative social awareness*** includes a critical social awareness that explicitly recognizes the salience of diversity and systemic inequalities. ***Transformative relationship skills*** incorporate multicultural competence in the building of trust within relationships. Finally, ***transformative responsible decision-making*** looks beyond making smart choices that positively impact only one's self toward those that consider collective well-being.

Transformative Social and Emotional Learning for Teachers

SEL is most often discussed in terms of student outcomes, but a growing body of research also focuses on the importance of SEL for teachers (Blumenfeld-Jones et al., 2013; Campbell, 2013; Fallona & Canniff, 2013; Kasalak, 2020; Kim et al., 2020; Santoro, 2018; Schonert-Reichl et al., 2017). For example, the work of Blumenfeld-Jones et al. (2013) makes a case for why the development of a teacher's own ethical self is so important for educators. Kasalak (2020) highlights for the significance of teacher self-compassion. Santoro's (2018) research on teacher demoralization emphasizes the impact of teacher identity and morality on longevity. Fallona & Canniff (2013) have argued for the moral development of teachers specifically to foster a stance committed to equity and justice. These research findings and perspectives highlight the power of SEL not only for the well-being of educators themselves, but also for the ways in which holistic teacher support directly benefits students.

There is a body of research that also points to the importance of focusing on teachers' own critical awareness and identity development in order to support students equitably and holistically (Donahoe-Keegan et al., 2019; Tintiangco-Cubales, 2015; Ulluci, 2010). For example, Tintiangco-Cubales et al. (2015) have advocated for credential programs to weave Ethnic Studies content into coursework, engage teachers in critical self-reflection, and create spaces for teachers (particularly White teachers) to reflect on their own biases and positionality. Similarly, Ullucci (2010) has noted the need for increasing coursework focused on multicultural development for teachers; supporting pre-service teachers in recognizing dominant, problematic narratives and providing them with new lenses for analyzing entrenched, harmful practices; and fostering racial awareness and understanding, while

also cautioning against the development of a White savior complex (Aaronson, 2017).

Despite the existing research, many scholars point to the need to better support teachers in these ways (Cochran-Smith et al., 2009; Goodwin & Darity, 2019; Martell, 2018; Schonert-Reichl et al., 2017; Tintiangco-Cubales et al., 2015), and more research is needed to better understand how to prepare teachers accordingly.

Methods

Participants

In order to better understand how teacher preparation programs prepare teachers in these ways, we spoke to 11 teachers from across the United States employing a purposeful sampling approach (Creswell & Guetterman, 2019). Teachers were asked to participate if they had a documented track record of centering SEL in their classrooms, working for social justice or activism, or were recommended by colleagues for being exemplars of SEL or equity work. Their teacher prep programs ranged from undergraduate to graduate to alternate certification programs. Teachers came from a variety of racial/ethnic backgrounds, with varying amounts of teaching experience, and had experience teaching in grades across the PreK-12 spectrum.

Data Collection

In January-July of 2020, we conducted 45 to 60-minute, semi-structured interviews (Seidman, 1991) via Zoom with each participant. To avoid educational jargon, the term "transformative SEL" was not explicitly used, but rather alluded to through questioning about social-emotional and social justice programming. Some sample queries included, "To what extent do you feel that your teacher preparation program prepared you to meet the social-emotional needs of your students?" and "To what extent did your program prepare you to center diversity, equity, and inclusion in your classroom?" and "What do you think are the best ways to prepare teachers in these ways?"

Data Analysis

All interviews were recorded and transcribed verbatim, and we analyzed our data through a thematic analysis approach (Braun & Clark, 2013; Maxwell, 2013) relying on both deductive (emic) and inductive (etic) coding to inform our findings (Maxwell, 2013). All interviews were double-coded by both authors and any disagreements and additional coding suggestions were resolved through discussion. We grouped themes into a conceptually clustered matrix (Maxwell, 2013) allowing us to look for patterns in the data including sorting participants' responses into the transformative SEL framework.

Results

Data analysis revealed that one of the primary ways that teachers in our sample conceptualized their own preparedness to foster students' transformative SEL was through the development of their own transformative SEL. Below we illustrate the ways in which teachers explained the importance of attending to their own development in these ways in order to meet their students' transformative social-emotional needs.

Transformative Self-Awareness: Critical Self-Analysis

Recall that Jagers et al. (2019) upheld *critical self-analysis* as a key indicator of self-awareness at the transformative level. Teachers in our sample consistently spoke of the importance of critically reflecting on

their own race and biases in order to support their students' SEL in ways that are consistent with this competency. For example, Vida**,** a white woman who worked in an urban public school with predominantly students of color reflected,

> *I think it's really important to do personal reflection on, 'how do I want to approach this?' I know there's going to be a disconnect, I know that there's going to be a trust issue. And I think you really need to confront possible biases coming in, even if you don't think you have them. How are you going to deal with that?*

Dolores, a black teacher at an urban charter school, similarly spoke about the importance of teacher identity development:

> *Teaching – everything you're doing – is going to be biased, whether it's for better or worse. So, I think making teachers conscious of it; putting it in the forefront: everything you do in your classroom is influenced by your experiences and your identity.*

This belief in the importance of explicitly addressing teacher biases was echoed by Isa, a White teacher working at an urban public school, who reflected that her lack of awareness of her own racial identity could have been problematic but that her teacher prep program helped to support this development: "It's embarrassing to look back on how unaware I was and how much room I had to grow in terms of recognizing that. So, I did a lot of learning and growing at [teacher prep program] for that." Phoebe, who is also White and worked at an urban charter school, spoke about the critical importance of this kind of reflection in order to combat white savior complex in order to truly be able to support her students' overall well-being:

> *I don't think I went in with a white savior complex completely, but I think there's a spectrum of white savior complex. There's the thing you hear about a lot which is the obvious negative: like, oh, I'll save all these poor kids; and then there's the other end of the spectrum. And somewhere in between there's is a part of you that feels like you're better. And I think I went into teaching feeling like, well these are whole people, but I can help them be better or something, you know? I think there's a turning point that happens; maybe it's through reading and learning or having conversations with people who don't look like you, where you realize you really truly feel – and not just know, because I always knew that my students were of equal value to me – but there's a turning point when you actually feel it, truly feel it. And I didn't know I didn't feel that way, true in my heart, until I did.*

Phoebe's honest reflection on working through her own internal biases are a crucial window into why this kind of critical self-awareness for teachers is so important. By shedding light on her own biases, she was able to make a fundamental shift in her own mindset to be able to truly value, respect, and support her students.

Transformative Self-Management: Cultural Humility

Jagers et al. (2019) emphasized the importance of cultural humility as an element of transformative self-management. Cultural humility can be understood as holding an other-oriented stance (rather than self-focused) and respecting and honoring (rather than feeling superior toward) others' cultural backgrounds and experiences (Hook et al., 2013). Consistent with this conceptualization, teachers we spoke to reflected on how the development of this kind of mindset was an important piece of supporting their students' social-emotional learning through an equity lens. For example, Carmen, a

black teacher who worked in urban public schools, spoke about the importance of teacher training programs fostering a sense of cultural humility and supporting teachers in addressing their own beliefs and values to ensure that the students they work with will be treated with care and respect:

> *People who are running the program should watch closely how people are interacting with kids. Having lots of conversations were really powerful in terms of getting to know what people's beliefs were, what their value systems were, what they were thinking about things, where they had ignorances, and how to tackle those things.*

She emphasized that it was beneficial to have space to tackle these areas of ignorance when in a safe learning environment "while you're in a program with a supportive group of people who you are building friendships with and trust, versus when you are actually in the profession and you may not feel as comfortable to share and you may not have as much time to have those conversations."

Vida gave a specific example of what this could look like, reflecting on a time when she had to humbly admit that her original approach with a student of color was not respectful of that student's identity and autonomy and how another teacher helped her to realize this. She explained how she had coordinated a meeting with this student and the response that ensued:

> *[The student] was so mad about coming in, and [the teacher] was like, "What did you say when Vida asked you when would be a good time for you to do this?" And I was like, "Oh my god, no, I didn't ask her. Of course, I didn't ask her. I was like, adults make plans, and you bring kids in." And that was sort of like a check for me: the different ways that you try to honor a kid's perspective, which is easy to forget when you're an adult.*

Through this experience, Vida's own humility in recognizing where she was wrong played an important role in shifting how she worked with students to include them as valued, respected members in problem-solving scenarios. It is important to note that Vida perceived her teacher preparation program as woefully lacking, and many of the stories that she shared were lessons she learned on the job, but that she wished she had learned in advance when she was still in training.

Transformative Social Awareness: Critical Social Analysis

Jagers et al.'s (2019) conceptualization of transformative social awareness incorporated an element of critical social analysis, and teachers in our sample spoke about this competency as an important way of supporting students' transformative social-emotional learning. Phoebe reflected on the ways teachers' critical analysis of racist practices and policies could support students' own awareness and confidence. She advised,

> *Make sure your sources are not rooted in white supremacy. Use texts by people of color and different perspectives and voices. Representation is so much more important than I ever knew. I always knew it was important for kids to have teachers that look like them, but I never really thought deeply about why that is. There are lies that white teachers can perpetuate unintentionally, just from having lived their life as a white person.*

Similarly, Carmen spoke about the benefits of teachers educating themselves to learn about the racial and cultural histories of their cities and students, speaking specifically about the importance of this for white teachers who will be working with students of color:

> *I think some students can fly through their programs because they're super*

smart, or they're very ambitious, and their grades and academics look great, but they may be missing that social emotional piece; they may be missing that race and equity and social justice piece. And I think those are the things to be wary of. In [graduate program] I learned about racial equity, how racist my city was; I learned about white flight, redlining, the levels of need in in big districts. All that was highly valuable. I believe it's really important in undergrad for young people who are getting into teaching to start learning about those things.

What is especially notable about these reflections is that teachers spoke about developing this critical awareness specifically as a foundation in order to meet their students' transformative social-emotional needs.

Transformative Relationship Skills: Relationship Building & Multicultural Competence

When conceptualizing transformative relationship skills, Jagers et al. (2019) emphasized the importance of not only relationship building itself, but also multicultural competence in the forging of these bonds. In an aligned way, many teachers spoke about the importance of training educators to have the skills to build classroom communities, to foster meaningful relationships, and also how to do so in a culturally competent way. First, Catherine, who is white and taught in an urban private school, shared a comment that encompassed many other perspectives in our study:

I think to be successful teacher you need to create a community in your classroom no matter what age the kids are. People need to feel safe, to have a voice, and know that they're going to be respected.

Importantly, teachers also spoke of the need for educators to build their own multicultural competence in the building of these kinds of communities. Tina, who is White and had taught in public, private, and charter schools in both urban and suburban areas, spoke about teacher cultural competence as foundational, noting, "You should be aware of race issues in our country and how to be culturally responsive;" and Carmen commented on the need for "open forums to talk about race and cultural competency" and that "connectedness is a huge thing because if that is missing, then maybe that teacher is not ready, because that's where it starts." Carmen's emphasis on race, cultural competence and connectedness again highlight the need for teachers to develop these kinds of transformative social-emotional skills for themselves as a foundation for the benefit of their students.

Transformative Responsible Decision-Making: Collective Well-Being

Finally, recall that Jagers et al. (2019) upheld collective well-being as a key element of transformative responsible decision-making. Vida spoke of the no-excuses discipline approach at her first school that she felt was harmful and biased against students, and shared that she didn't yet have the transformative decision-making skills needed to support the well-being of her students:

I started at a school that was a mess and they were starting to use this new, no nonsense classroom management thing through the district. And all the experienced teachers were like, 'well, this is just dumb, this doesn't work,' but I didn't know. I just did what they told me to do.

Vida shared that she wished she had known more about how to challenge these kinds of policies and urged teacher preparation programs to support teachers in developing the knowledge and skills to be able to make responsible decisions for the collective well-

being of their students.

Mary, who is latina and worked in an urban public school, shared how her teacher preparation program lay a foundation of social justice, but how she wished she had been provided more support in that area. Here she explained how she was working to support the collective well-being of her students through her own responsible decision-making:

> *I think [our program] did talk about social justice, but not deep enough. One of the things I'm trying to get better at is teaching my students those hard parts of history that maybe they don't get taught other places. I'm trying to be better at bringing the solutions into place and how they can be a part of that solution or what they can do. With the younger kids, you definitely need to have the uplifting part at the end; they need to feel that possibility to change it, and then give them that feeling of being changemakers. I'm trying to get better at it. I'm still not quite there, but I'm learning that's what they need.*

Here we see Mary grapple with how to integrate a social justice approach into her teaching in a developmentally appropriately way, illustrating again, how teacher transformative SEL (in these cases, learning how to make informed, culturally responsive, responsible decisions) is inextricably linked to students' own transformative social-emotional development and collective well-being.

Discussion & Conclusion

Focusing on teacher SEL to support student SEL is not a new idea; indeed, even though more research is needed, there is a body of scholarship documenting the ways in which teacher mindsets, well-being, morality, and SEL more generally can impact student social-emotional learning (Blumenfeld-Jones et al., 2013; Fallona & Canniff, 2013; Kim et al., 2020; Sanger & Osguthorpe, 2014; Schonert-Reichl, 2017; Zinsser et al., 2019). In addition, a focus on training teachers to center equitable practices in their classrooms by first critically analyzing their own biases, privileges, and identities is hardly a new concept either, with a body of research supporting the benefits of this as well (Aaronson, 2018; Goodwin & Darity, 2019; Tintiangco-Cubales, 2015; Ullucci, 2010). Nonetheless, our research contributes to the field of teacher preparation in SEL by highlighting the ways in which transformative social-emotional learning (Jagers et al., 2019) can be leveraged as a framework for considering how to support teacher preparation in fostering an equity-grounded, culturally sustaining vision of social emotional learning in their classrooms. Below we present some sample recommendations that teacher educators might consider in order to cultivate each of the transformative social-emotional competencies detailed above.

First, in order to foster ***critical self-analysis***, teacher preparation programs might emulate a university course reported on by Donahue-Keegan et al. (2019) that asks teacher candidates to read a chapter from *Culturally Responsive Teaching and the Brain* (Hammond, 2015), to reflect on their own backgrounds and identities, to take the Implicit Association Test (Greenwald et al., 1998) and reflect on their own biases, and then to discuss the role of privilege and power in society and schools. Similarly, programs might look to the work of Goodwin (2002) who described an assignment where teacher candidates closely examined a single student's learning trajectory and were provided with multiple opportunities to reflect on and to challenge their own biases and preconceived notions.

Second, the work of Brown et al. (2016) provides some insight into how

teachers might develop ***cultural humility***, describing the ways in which guided critical reflections allowed teacher candidates to grapple with their own ideologies and positionalities as well as their students' contextual surroundings, "funds of knowledge" (Esteban-Guitart & Moll, 2014), and family histories. Importantly, these reflections were intentionally situated within field experiences to support the transfer of this knowledge to working with children and families from a range of backgrounds.

Next, in order to foster a sense of teachers' own ***critical social analysis***, teacher prep programs can engage their candidates in literature highlighting the importance of diverse representation in the classroom (Huyck et al., 2016; Jiménez, 2018), the perpetuation of systemic inequality (Bonilla-Silva, 2013; Love, 2019; McGhee, 2021; Rothstein, 2017), and lesson plans that specifically address these issues (Learning for Justice, Zinn Education Project, Facing History & Ourselves).

In order to support educators in developing transformative relationship skills and ***multicultural competence***, teacher preparation programs might consider how to shift courses on classroom management to include lessons on how to build a classroom community (e.g. Responsive Classroom), how to set classroom agreements (Singleton & Hayes, 2013), how to honor students' historical and cultural identities (Muhammad, 2020), and how to approach classroom community in a culturally sustaining way (Weinstein et al., 2004).

Finally, learning to be a transformative responsible decision-maker in order to ensure the ***collective well-being*** of one's students can involve opportunities to practice just this. For example, teacher candidates might be given case studies in which they need to consider how to navigate challenging decision-making that will impact their students so that they do not feel unprepared when faced with these kinds of realities (Shapira-Lishchink, 2011).

This list of recommendations is of course not comprehensive as each of these competencies is complex, robust, and malleable. Nonetheless, we hope that this is a helpful place to start in considering how to support teachers' transformative SEL development. As one of the teachers we spoke to, Phoebe, aptly put it, "You shouldn't be allowed to step into a classroom if you have not done that work on yourself."

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Challenging and Rewarding: Being Both a Paraprofessional and a Preservice Teacher during a Global Pandemic

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Abstract: The role of the preservice teacher, during the final semester of the collegiate journey, has typically consisted of a fixed amount of time spent in one classroom as an opportunity to learn the day-to-day operations. This includes lesson planning, classroom management, and all other duties of the assigned teacher. Factor in a global pandemic, and the process shifts. In this study, the researchers present a new dynamic to the preservice teacher experience – serving as a paraprofessional. This qualitative analysis provides a snapshot of four preservice teachers' experiences in this newly developed dual role of student teacher and paraprofessional during a pandemic.

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Introduction

Preservice teachers have spent years entering the school setting with a cooperating teacher and a university supervisor, spending their time shadowing one or two professionals, focusing on learning the routine of the classroom, gaining experience in the development and implementation of lesson plans, and striving to learn best practices in classroom environment. In the year 2020, there was a shift in this experience. Both teachers and preservice teachers found themselves forced out of their classrooms and providing instruction in the online environment through the utilization on learning platforms, such as Moodle. Suddenly, the traditional experience of going to physical building each day took a sharp turn to providing instruction from home, causing a shift in the way the student teaching experience was implemented.

One opportunity that presented itself was that of preservice teachers branching out beyond shadowing their assigned teacher and filling the role of the paraprofessional in the special education setting. In the role of paraprofessional, preservice teachers became more of a colleague than mentor/mentee due to the change in teaching sparked by, again, the pandemic. In this study, this unique experience in working in a dual role is shared and discussed from four preservice teachers, looking at both the advantages and disadvantages of this temporary hybrid position.

Literature Review

Preservice Teachers and Responsibilities

Preservice teachers slowly gain responsibilities within the classroom as they learn and grow. An important part of the student teaching experience is the aspect of lesson planning and putting them into practice (Courey et al., 2013). As preservice teachers write and implement multiple lesson plans, they learn what the responsibilities are like for a classroom teacher (Sawyer & Myers, 2018). In this experience, preservice teachers begin to implement pedagogies from their coursework and evaluate the effectiveness of these strategies (Daniels et al., 2016). This practice often begins with a few lesson plans per week and shifts to multiple plans per day as preservice teachers move through the student teaching experience.

Reflection is a powerful tool within teacher education and is something that preservice teachers can use to better understand their practices to improve upon them (Kaya & Öz, 2021). Reflection creates an active learning process for preservice teachers to learn new ideas and continue their professional development. Hong et al. (2019) conducted a study with 25 preservice teachers where they found that "preservice teachers were able to significantly enhance their reflective capacity by increasing their "teaching concerns about learners" from the first to the second phase" of their preservice teacher experiences (p. 117). A common practice for reflection lies within journaling and the discussion of journal entries with either the cooperating teacher or the university supervisor.

As lessons are implemented in the classroom, preservice teachers also need to manage the classroom. These management strategies often come from the mentor teacher and are gained through observation or one-on-one conversations between preservice teacher and mentor teacher (Sempowicz & Hudson, 2011). As a result, mentor teachers often influence the way a preservice teacher will manage a classroom. As the preservice teacher familiarizes themselves with the nature of the classroom, they adopt the management styles of the mentor teacher as it is what the students have come to know.

Interactions between mentor teachers are an essential aspect of a preservice teacher's many responsibilities. The relationship that is built can affect the entire experience. The mentor teacher is an "irreplaceable contributor to the professional preparation of teachers and serves as an integral part of the teaching practice experience in terms of providing support, direction, role-modeling and supervision for student teachers" (Lojdová, 2020, p.177). Beyond the classroom, mentor teachers shape how preservice teachers interact with parents, the school, and the community (Lojdová, 2020). Research has shown across the past two decades that mentor teachers directly influence preservice teachers' thoughts and practices (Brandon & Butler, 2012; Bunting, 1988; Zeichner & Gore, 1990). This supports the notion that creating a solid relationship with a mentor teacher will allow for deeper, more comfortable learning of the preservice teacher.

Preservice Teachers and Special Education

One aspect of the preservice teacher experience lies within the area of special education. Even for those preservice teachers not seeking Special Education Certification, working with students with disabilities in the classroom setting is expected for today's preservice teachers as inclusion continues to be at the forefront of education. Yu and Park (2020) examined preservice teachers' perceptions in working with students with disabilities and found that one-on-one interactions with these students helped them shape their attitudes. This study lends itself to the study at hand as the participants found themselves working with students with disabilities, yet in a different capacity as paraprofessionals in addition to their role as a preservice teacher.

Additional studies, some from other parts of the world, support these interactions. For example, in Sweden, Uusimaki et al. (2020) studied preservice teachers' perceptions on "attitudes, concerns, and intentions to include children with disabilities in regular classrooms" (p. 23) While in Australia, Goddard and Evans (2018) evaluated preservice training and its impact on perceptions of preservice teachers concerning students with disabilities. Both of these studies indicate that while there may be concern about working with students with disabilities, attitudes were typically positive and there were signs of efficacy. It is studies of this nature that demonstrate the need for all teachers, including preservice teachers, to have a strong knowledgebase founded in the basics of special education.

These studies demonstrate the need for preservice teachers to understand best practices in working with students with disabilities in the regular classroom setting. One way in which preservice teachers develop a richer understanding of how to meet the needs of our embedded students best involves collaboration with paraprofessionals in the classroom setting.

Paraprofessionals in the Classroom

When assistance is needed either for the teacher with the implementation of a lesson or activity; or with students in a one-on-one fashion, paraprofessionals are often called upon to serve. There are varying titles for paraprofessionals, including terms such as "paraeducator, instructional assistant, educational assistant, one-on-one aide, teaching assistant, or paraprofessional", which will be used hereafter (Douglas et al., 2019, p. 195). Despite the varying titles, the work of the paraprofessional is streamlined to support the teaching staff in which they are assigned. Paraprofessionals typically work under the supervision of a teacher or another

professional within the school setting, most often in the special education classroom (Douglas et al., 2019; Stewart, 2019). This directly relates to the additional responsibilities found within the special education classroom, highlighting the need for assistance to ensure meeting students' needs.

The paraprofessional duties can vary from general assistance in whole or small group settings to individualized instruction for students struggling in some fashion. With the increase of students with disabilities in the general classrooms, paraprofessionals have transitioned into a more teacher-like role, specifically when working with students on the autism spectrum (Mason et al., 2020; Wermer et al., 2018). Due to the role they play in the daily interactions with students and the impact they have in student academic success and social interactions, paraprofessionals have become a necessity in the classroom (Brown & Stanton-Chapman, 2017; Tarry & Cox, 2013). This shift in responsibilities has triggered a shift in the work between professional educators and paraprofessionals.

One common theme among the literature relating to the changing role of the paraprofessional lies within the need for strong collaboration between professional educators and paraprofessionals (Biggs et al., 2016; Douglas et al., 2019; Hendrix et al., 2019). With the increase of students with disabilities in the classroom setting, the need for interventions to deal with these behaviors remains critical. Hendrix et al. (2019) acknowledge that "students with disruptive behavior can be a challenge for school staff and negatively affect the classroom environment, and yet it is incumbent upon educators to prevent, manage, and respond to behaviors in a way that minimizes classroom disruption and maximizes academic instruction" (p. 214). These behaviors are often addressed in tandem between teachers and paraprofessionals, highlighting the value of the paraprofessional in working with students with disabilities.

Preservice Teachers as Paraprofessionals: A New Model

The premise of this study lies in a new initiative for preservice teachers and their ability to learn in a dual role – classroom teacher and paraprofessional. As it was a global pandemic that opened the door for this multi-faceted experience there is, perhaps, the opportunity to continue offering preservice teachers this unique experience. There is an apparent need for research on this topic and this paper is a step in providing data on personal reflection of preservice teachers serving in the paraprofessional role.

Methodology

The qualitative methodology used for this study was a phenomenological approach to illuminate the specific lived experiences of four preservice teachers who were simultaneously paraprofessionals during the Covid-19 pandemic in the 2020-2021 school year (Alase, 2017). This study utilized thematic coding by identifying text from the preservice teachers' journals that organically had common themes and which created a coding key. A second round of coding was conducted utilizing the key for all journals (Saldaña, 2021).

Participants

The four participants who took part in this study were seniors enrolled in the same university in Pennsylvania who dual majored in Elementary and Early Childhood Education as well as Special Education. All four participants are female. The participants were able to start the academic school year as paraprofessionals because of the pandemic. They were still in their senior year of

college, but due to remote classes from the university, the participants were able to manage their time accordingly to fulfill both roles of college students and paraprofessionals. They were also given the opportunity to be paraprofessionals and preservice teachers simultaneously because of the pandemic. Without COVID-19, the elementary school may not have been in such a need for staff, and the higher education officials involved may not have been so accommodating.

Research Question

The research question that guided this study was: What were the benefits and challenges of being a paraprofessional and preservice teacher during the Covid-19 Pandemic during the 2020-2021 school year?

Findings

Through data analysis, the main themes that emerged were balance and lack of prep time, comfort and confidence, learning experiences, and gratefulness. This section will detail these findings.

Balance and Lack of Prep Time

Becoming a paraprofessional and a preservice teacher simultaneously generates a lot of responsibilities at once. Student A, B, C, and D all agreed that balance is a key component to obtain while completing both responsibilities. At times, it was very difficult to balance each individual duty during a hectic school day and could wear a person down both physically and mentally. Additionally, a lack and loss of preparation time throughout the school day happens when they are working both responsibilities at once. Much of the time the paraprofessional/preservice teachers were taking work home that included lesson planning, preparing materials, grading assignments, and more when they were off the clock and on their own free time. Finding the right balance and equilibrium can help a professional succeed in this unique position. The solution to this dilemma is some adjustment periods, figuring out an adaptable schedule, and patience.

The global Covid-19 pandemic has changed the world as people know it, especially inside of the school systems. These are very unprecedented times and not one single school day looks the exact same. There are many new challenges with teaching, lesson planning, creating activities, and more because of the regulations and rules schools must abide by. Arguably the biggest challenge for an educator thus far has been creating lessons in which students are provided with proper distancing and individualized equipment and materials. Creativity is an essential quality to have as an educator, now more than ever, to be able to generate and design safe lessons that are still meaningful and engaging for all students involved. These flexible accommodations allowed the paraprofessional/preservice teachers to become more adaptable, flexible, and innovative.

Comfort and Confidence

Taking on the role of a paraprofessional has impacted and further prepared the participants for their student teaching experience. Familiarity with the staff, students, and school system allowed each participant to feel a level of comfort when making the transition from paraprofessional to preservice teacher. Participant A stated, “Being a para has opened so many doors for me to see a variety of grades, classes, teaching methods, and more while also modifying lessons and activities for my students.” Being a paraprofessional includes adapting and individualizing materials for students with a wide range of instructional levels. Three out of the four participants discussed in their

journals how their experience with differentiating instruction supported their roles as a preservice teacher in both their general and special education placements. Participant D stated that because of her experiences individualizing instruction for the students on her paraprofessional caseload, she was able to recognize how to "bridge the gap" between students who are higher achieving and those who succeed at an average or lower rate. The participants have seen first-hand how a student may struggle in a general education setting and therefore require a least restrictive environment for a percentage of the day and/or specially designed instruction to promote success.

Taking on both roles in a global pandemic has only added to the experiences the participants received. Communication skills were strengthened as it was a necessity for professional staff to constantly be in contact to ensure the students were being delivered a consistent and proper education during lockdown. These skills were translated to student teaching by communicating with cooperating teachers and families. The participants and other staff used journals, logs, and emails to record student data and discuss instructional strategies. Along with other teachers and professional staff, the participants discovered digital platforms that they were able to implement within their student teaching to satisfy the COVID-19 protocols. The participants still needed to modify the materials for each student within the confines of the new technology. Being a paraprofessional before also becoming a preservice teacher, has positively impacted the instructional outcomes of the participants' lessons and supported them in their responsibilities as a preservice teacher.

Learning Experiences

Being a paraprofessional prior and along with student teaching bestowed the participants with a variety of learning experiences. Three of the participants were set in an elementary setting for a duration of their time while the fourth participant got to experience both a high school and an elementary setting. Three out of the four participants expressed how much they learned about modifying and adapting materials. The high school placement, Participant C, had the opportunity to work with the district's health teacher to modify the class materials and assessments for a Life Skills student. "It is a chance to constantly expand your knowledge. I never saw myself working in a high school setting, but now that I am placed in one loving it would be an understatement", stated Participant C. This unique situation also gave our participants the opportunity to see the time and investment teachers put into their students outside of the general curriculum. Participant D enlightened us on how her cooperating teacher would buy all the necessary hygiene materials, along with clothes, to ensure her students were taken care of during the school day. Finally, our teacher candidates learned the true meaning of juggling. The world of education grants us to work with a diverse population of students and all the necessities that come with them. "I remember in elementary school I tried to learn how to juggle; while I still cannot juggle handkerchiefs or balls, I can definitely juggle students and all the goals that come with each one" expressed Participant C.

The participants learned a whole new side of the education system with this situation occurring during a pandemic. In correspondence with having to juggle many different tasks of a teacher, the teacher candidates experienced both in-person and virtual learning. Participant A quoted, "I have learned many tricks of how to juggle preparation and instruction for students who are there and those that are not. I have had to gather belongings and two weeks of

instructional materials for students who have been exposed. I have taught virtual learning. I have modified lessons and assignments to be interactive online. I thought that this experience during a pandemic would be completely overwhelming; however, I believe that it has taught me more than I could've ever imagined." The pandemic enabled our participants to expand their knowledge on ways to use technology in the classroom. All the participants stated how busy their days were, but the learning experience that came out of it made it all worth it.

Gratefulness

A common theme in the data is how grateful the participants were for having the paraprofessional/student teaching opportunity. The participants mention their appreciation for things such as the opportunity, experience, and exposure. For example, participant C stated, "I become more confident in my teaching every day and I can thank my work as a para for that as well. Paraprofessionals are so much more than just an aide in a room, they truly are the glue that holds rooms together." Participant B said, "I feel that this opportunity was once in a lifetime, and I am overjoyed that I got this experience!" Participant A expressed their gratitude by saying, "I have more responsibility. However, I love the responsibility! Overall, I am so very thankful for the opportunity to do both!" These are just a few of the examples from the data that show how grateful the participants were!

Along with the Coronavirus creating this opportunity to play both roles, it also created some of the other experiences the participants mentioned they were grateful for. For example, in-person and remote learning. The pandemic made things possible for these participants that most would not have the opportunity to do.

Limitations

This study is not generalizable due to the nature of the unique situation and time during a global pandemic. Replication of the study is also difficult with the rare circumstances the students faced.

Conclusion

Despite the fact that a pandemic was the motivator in providing some preservice teachers with a rare chance to work in a dual capacity during the preservice teaching portion of their studies, the findings demonstrate both positive and negative attributes to this experience. While there is a need for strong need for time management, the strengths of this opportunity outweighed the concern for lack of time. Working in the paraprofessional role allowed for growth in terms of knowledge of making modifications or addressing accommodations for students with disabilities. The participants indicated that they were able to improve communication and the common theme of gratitude for the experience indicates support for further exploration in the feasibility in offering this opportunity for teacher candidates during a traditional school year, with a pandemic sparking the need and instead, relying on the value of the experience to prove its worth.

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Challenging and Rewarding: Being Both a Paraprofessional and a Preservice Teacher during a Global Pandemic

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