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**AN INTERNATIONAL PEER-REVIEWED
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Inside this issue:

- ◆ Tackling Poverty Through Financial Literacy...
And Reading, Too!
- ◆ The Impact of Implicit Racial Bias on Students'
Grade Point Average in Predominantly White Colleges
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- ◆ The Future of Peer-to-Peer Education:
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Transforming a COVID-19 Literacy Learning Loss
Research Study into Children's Literature
- ◆ Interactive Literacy Manual for Pre-Service Teachers'
Use in Their Professional Practice
- ◆ Book Review:
Educational Pluralism and Democracy: How to Handle
Indoctrination, Promote Exposure, and Rebuild
America's Schools

Practical Research for the Educational Community

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SCOPE Education Services is a not-for-profit, private, voluntary organization permanently chartered by the New York State Board of Regents to provide services to school districts. Founded in 1964 by school superintendents, it is a cooperative venture for sharing resources to deal with common concerns. It is governed by a Board of Directors of school superintendents and college representatives and serves as a regional School Study Council and School Board Institute.

The Editorial Board of the Journal for Leadership and Instruction has identified the following thematic interests for the 2024 issues:

1. An identified topic for emphasis for both the Fall '24 and the Spring '25 issues.
2. Specific Calls for Papers to emphasize each topic for each issue.
3. Invitations to Guest Editors to marshal and emphasize articles related to our priorities.
4. A series of panel discussions with recognized leaders in and expertise about these issues.
5. A users group who might want to contribute to specialized action research projects.
6. A webinar series to complement our advocacy.

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Episode Title (Episode #)	Speakers	Date Published
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How Teachers Perceive their Principals' Effectiveness in Supporting Special Education Student Needs (003)	Rene Parmar, Rich Bernato	10/24/2022
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Editor's Perspective



This column will offer you an overview of an excellent array of submissions the JLI Editorial Board has accepted for publication in our Fall issue. It will also suggest their important themes for the readers, researchers, and practitioners who read these in hard copy or from our excellent website. Finally, it will update you on some changes and intents the Board is considering.

The "what - lies - beneath" themes that each article implies, distill to and align with this Board's intentions to catalyze researcher and practitioner thinking, basic beliefs, and values, are provocative. Together, each takes a lens to matters of poverty, racial bias, curriculum innovation, learner learning loss, and literacy mastery. At their combined deepest level(s) they ring the school improvement bells.

Tackling Poverty Through Financial Literacy...And Reading, Too!, authored by Morgan O'Sullivan, Ed.D., Kelly, A. Burlison, Ed.D., and Brittany E. Kiser, Ed.D. offers insight about how matters of financial literacy, often ignored or minimized in conventional curricular offerings, deserves its place in instruction as an essential element in education.

Dr. Edwin Mathieu's article considers "The Impact of Implicit Racial Bias on Students' Grade Point Average in Predominantly White Colleges and Universities" that may suggest a hard review of how this factor may affect minority students.

The Future of Peer-to-Peer Education: The Student Perspective constitutes a unique offering by the JLI. Dr. Gabriella Franza, an administrator in Baldwin Schools, worked with high school Student Writers, Morgan Jackson, Mia Randazzo, Jordan Hall, and Maekyla Massey to construct a scholarly research article that provides students' review of an innovative curriculum sharing project that they observed and evaluated.

Dr. Rachel Yudin's research, From Study to Story: Transforming a COVID-19 Literacy Learning Loss Research Study into Children's Literature, investigated the thorny issue of learning loss that characterized the challenging COVID-19 period and provides suggestions about how these might be overcome.

Interactive Literacy Manual for Pre-Service Teachers' Use in Their Professional Practice, by Drs. Madeline Craig, Patricia N. Eckardt, Katherine M. Patterson, and Anthony Grant, studied how preservice teachers can benefit their own instructional mastery with active reflection.

Finally, Dr. Anthony Annunziato provides a detailed analysis about our country's demographic trends that must be weighed when considering meaningful full school reform efforts, in Ashley Rogers Berners' book, *Educational Pluralism and Democracy: How to Handle Indoctrination, Promote Exposure, and Rebuild America's Schools*.

The Journal's editorial board continues to sharpen its intents to offer a spectrum of support to researchers and practitioners. These reflect the Board's desire to catalyze meaningful change. In addition, other Board plans include new efforts to use clips and excerpts from published research in our various social media venues as well as to promote and widen our podcasting efforts. This will take the form of specialized programs about ongoing research, matters of current interest and concern, and webinars.

Our Editorial Board members have changed. Dr. Eustace Thompson has retired from the Board. His stellar character, reputation and contributions to leadership practices will be sorely missed by the Journal and by anyone who knows him. Dr. Rory Manning, Superintendent of Schools at Harborfields has joined our board. His research background and record of leadership accomplishments in Long Island school districts, will be a welcome addition.

Napoleon once offered that "... an army survives on its stomach." In truth the Journal of Leadership and Instruction, surely not an army, yet also an organizational extension of SCOPE's mission, cannot thrive without the dedicated services and attentions to detail that are routinely and expertly provided by its staff.

This journal, in its Silver Anniversary year, we are proud to point out, is certainly grateful for their efforts. Mrs. Judy Coffey has been with the journal since Day One. We have been saddened on the one hand and glad for Judy on the other, when she recently informed us that she was stepping away from the journal's publication efforts. Her tireless perfection and will to help us create a quality journal are noted and appreciated beyond words.

With that, we welcome Dr. Amy Eckelmann, currently our APA editor, who will now assume Judy's many tasks.

In conclusion and on behalf of the editorial board, peer reviewers, editorial and podcast staff members we combine to wish our research community a happy holiday season and best wishes for the coming new year.

Richard Bernato,
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Tackling Poverty Through Financial Literacy... And Reading, Too!

By Morgan O'Sullivan, Ed.D., Kelly A. Burlison, Ed.D.,
and Brittany E. Kiser, Ed.D.

Abstract

Outside of mortgage debt, student loan debt is the most common form of debt in the United States today. Just over half of American adults are considered to be financially literate, while similarly low reading achievement levels are occurring in our elementary schools. Research data has shown that there is a correlation between reading proficiency and academic success. Literature suggests that cross-campus collaboration is the key to designing a successful financial literacy program, as well as establishing equity. This article discusses the links between and the need for solid financial education programming in the elementary setting. Further, the authors suggest that the leveraging of financial literacy tools can provide both an economic and educational foundation that can indeed begin to establish the underpinnings for equity in post-elementary education.

Introduction

It all begins with a penny, nickel, or dime. The dream of purchasing a much-desired toy with money squirreled away safely in the piggy bank is arguably the first step on the road to financial literacy education for every child. Yet if this lesson is not taught in the home, it is unlikely a young child will learn it elsewhere as there is no formal financial literacy program currently in place for the elementary-aged child, and so many of our children in low SES circumstances are in need of these skills.

An awareness of financial literacy has become increasingly prevalent in the United States as individuals gain more access to increasingly complex financial options. The question that ought to be posed is whether, as a society, we should be reaching out to educate at the earliest of ages as an opportunity to close the poverty gap. One's grasp of financial literacy and its associated skills can have an impact on individual and family debt, health and health choices, planning for retirement, and general life decisions. These are issues generally reserved for adults to deal with, but is education at that time too late? Upon graduation from high school, teenagers are suddenly thrust into the role of adults, making adult-level

choices with varying levels of preparedness. An individual may encounter decisions ranging from moving away from home to purchasing a car, from getting married to starting a family, and from securing a job to securing a mortgage. The financial decisions taken at this stage in their lives can have major and significant long-term impacts on the individual. For many, how to finance any further education, which may well be a ticket out of poverty, will be the first major financial decision (Cull & Whitton, 2011). Surely there is a responsibility to prepare our children from a much earlier age to provide a gradual introduction to the world of financial literacy that will be more effective than the financial shock that comes with adulthood. With the consistent emphasis on reading across all schools, why not seek to combine this gradual introduction with the essential skills of reading?

When it comes to saving and money, the first real financial responsibility that an individual assumes, in most cases, is when they leave high school. Outside of an individual's mortgage, student loan debt is the most frequent form of debt (Verschoor, 2015). Should educators bear a moral responsibility to educate the youngest minds to prepare them for these financial tribulations in the years ahead? For young people, the concept of saving cannot be viewed in the same way as an adult saving for a vacation, car, or mortgage. These types of savings objectives tend to be abstract, not immediately tangible and beyond the relevant comprehension of our youngest minds. Combine these objectives with the regular, day-to-day worries of utility bills, insurance and paying for the next week of groceries, and we run the risk of overwhelming and scaring our children away from the world of finance forever.

Across the United States, 43% of adults did not meet the minimum criteria to be labeled as financially literate, according to the Global Financial Literacy Survey (Klapper, et al., 2016). The average credit card debt of undergraduate students exiting university is over \$3,000 USD, while the amount of student loan debt averages \$23,000 (Maurer & Lee, 2011). And yet, many parents and guardians today report feeling not yet ready or prepared to teach their children an understanding of money, further suggesting

that parents, universities, and the government have neglected the student population in terms of financial literacy, and poses the question, "who will step up to take on this important job" (Simmons, 2006). In similar fashion, Klapper, Lusardi and van Oudheusden (2016) point out that young people may be the ideal candidates for financial education given their vulnerability. Synthesized, then, these concepts encapsulate whether it is ever too soon to begin financial literacy education, and whether the classroom teacher should fulfill this role.

Financial Literacy in the Classroom

The elementary teacher is in a unique position to introduce financial literacy concepts to the classroom while linking the principles to their primary curriculum subject base. Simple concepts can be introduced to the elementary classroom, such as the idea of "needs versus wants." The theme of "needs versus wants" provides for a broad range of engaging activities which teachers may develop to engross and educate students. These are inexpensive to set up and also satisfy academic standards for a variety of content. For example, a teacher may arrange a soda or bottled water taste-test for students, and then invite students to try to differentiate between a branded and a generic product. The classroom discussion can be generated as to why some students prefer a branded, name-recognition label, including discourse around cost and if there is any real difference in the products before determining if the choice should be classified as a need or want. This activity can be followed with a persuasive written piece or a related reading text. While there is no correct answer in this scenario, the goal is to get students thinking about how they make their own financial decisions, even if they are relatively small at this stage in their lives. Through introducing financial concepts and understanding in an exciting and relatable environment, and aligning these themes to reading activities, the multidimensional objective would be to offer opportunities to bolster reading development and financial understanding, while laying the foundational blocks essential to ceasing the poverty cycle.

As with reading, age should not be a deterrent when discussing finances with a child. It is important for a teacher to make the subject matter relevant and meaningful by making connections. Research has indicated that experiential learning may be the key to unlocking an understanding of financial literacy for children (Amagir et al., 2018). Therefore, while a kindergarten or first grade student may not yet have a firm grasp of the value of money or how it may play a role in their future, it is possible to explain this concept through real-world examples, developing connections and lifelong learning. For example, a prime demonstration of this is asking a child how many Kid Meals from a fast food chain would need to be bought to compare to purchasing a toy that they really want. In this situation, it may be easier to convey the value of money to a child by saying a video game costs the same as ten Kid Meals, as opposed to \$39.99. The concept of "saving" can be introduced via a visual arts lesson. Students can be invited to bring an empty glass jar to school

(pasta sauce, peanut butter, jelly etc.). Using acrylic paints and proper brush technique, students can paint their own money savings box. This activity can provide for a discussion as to how people handle their coins in society today. Do people regularly carry coins, or is it more likely that they carry cash? In this scenario, students can think of different opportunities to collect coins, and utilize mathematical skills to look at how quickly the saving of coins can add up over a longer period of time.

At current, these types of financial literacy building activities are rare in schools, resulting in data which indicates most students just out of high school are financially illiterate (Kezar & Yang, 2010). Again, the essential foundation for educational success, including financial literacy, is learning how to read at a fluent and proficient level. According to the National Assessment of Educational Progress (NAEP), more than 25% of students in Grade 4 through 12 struggle with reading and vocabulary and are performing at least two grade levels below their respective grade level (National Center for Education Statistics, 2010). Approximately 70% of older readers require reading remediation to reach grade level proficiency once they reach middle and high school (Biancarosa & Snow, 2006). Research has also shown that as students progress through grade levels and reach high school, their motivation and interest in reading progressively diminishes, which in turn negatively impacts reading comprehension and other academic skills (Robb, 2006). This research and data demonstrate how essential the ability to read proficiently is required to assist in acquiring the knowledge for this foundation stone of exiting poverty.

Connecting Reading and Financial Literacy

Understanding of the increasingly complex world of finance has a direct correlation with reading and comprehension. Abundant research has shown that there is a direct relationship between reading achievement levels and high school graduation rates, as well as the link between poverty and matriculation. Multiple factors are associated with students who do not graduate high school; however, the single most common predictor of a high school dropout student is the inability to demonstrate proficient reading skills and this is further indicated in data as the majority of students who drop out of high school are poor readers (Fritz et al., 2009; Ediger, 2010). Frighteningly, Fisher and Frey (2008) discovered that approximately 30% of all ninth-grade students beginning their high school career become high school dropouts within a timeframe of four years. Additional data have shown that in the United States, approximately every nine seconds a student drops out of high school (Mallette et al., 2009). When matriculating into society, one unable to read and comprehend is likely to struggle with an understanding of finance. Thus, if an improvement in reading levels were to be attained, it should in turn lead to a greater comprehension in the field of financial literacy which may lead to a break in the poverty cycle.

Reading comprehension, on the whole, is a complex process. Struggling readers lack fluency, are more

Reading	Financial Literacy
Inferring [author meaning]	Balancing [allocation of funds]
Predicting [plot events]	Predicting [rates of interest, savings, etc.]
Identifying [central idea]	Planning [budget to debt]
Evaluating [author claim]	Evaluating [payment options]
Visualizing [imagery]	Visualizing [portfolio management]
Synthesizing [multiple passages]	Synthesizing [various sources]

apt to read slowly, and have a difficult time with reading comprehension. The struggling reader requires a significant amount of time and effort to improve these skills, utilizing texts that they find interesting to read, to increase their reading confidence and proficiency levels. The importance of and links between reading and understanding the financial literacy process should not be underestimated. As shown in **Table 1**, there is quite a bit of overlap between reading comprehension and financial literacy skill sets.

While activities that are introduced in the classroom can grasp a child's attention, it is the ability to read and review and understand real life examples that further and enhance a child's experience in the world of financial literacy. In essence, comprehension is everything (Serravallo, 2018).

The work of Klapper, et al. (2016) has shown that populations of less educated individuals are more likely to have low levels of financial literacy. It goes without saying that an ability to read and comprehend the written word would be considered a vital component to one being considered educated. Research has shown that if a student is not proficient in reading by the end of third grade, difficulty with reading comprehension is more likely to continue throughout the academic career and becomes more difficult to correct as a student becomes older (Ziolkowska, 2007). Similarly, the 2010 NAEP report indicated that children who are struggling to read in third grade are four times more likely to drop out or not complete high school when compared to children who are proficient readers in third grade (National Center for Education Statistics, 2010). This data indicates at a very young age, then, our students who are most likely to be lacking the skill set to become financially successful enough to leave their low SES circumstances. The challenges associated with a lack of reading comprehension and inability to think strategically or critically should not be underestimated during the financial decision-making process. If current K-12 students

are struggling to this degree in reading comprehension, what chance do our high school graduates have to be fully financially literate in this current environment?

Building the necessary skills for a successful financial decision-making process are linked to the learning process itself. Unrau (2008) believed that learning strategies that are student-directed enhance understanding, and provide opportunities for practice, discussion, and review that are effective in promoting successful small-group learning environments. When applying these strategies to reading, small-group instruction can help teachers identify the specific type of support and additional guidance that is needed for reading comprehension improvement (Unrau, 2008). Small-group instruction can assist students with test questions that assess their vocabulary and various forms of comprehension in order to be able to transfer the comprehension strategies to learning in other academic settings. The correlation of reading and understanding to financial literacy can be fully seen here. Small group instruction leading to the furthering of comprehension can only be to the overall betterment of financial literacy understanding and application towards poverty.

In a similar manner, as classroom educators are "supporting students with their choices in the classroom, kids can learn to make choices outside of school as well" (Serravallo, 2018, p. 212). This not only applies to financial literacy, but to reading as well. To improve reading achievement among students who are nonproficient readers, the inclusion of various materials other than textbooks can help encourage and foster student involvement and interests, which comes back to the earlier exemplars of financial literacy in practical classroom scenarios. Linking independence and giving students choice may increase reading achievement and the set of skills and knowledge they need to make effective decisions, both in reading and financial resources (Serravallo, 2018). Making connections to the

text in a smaller learning environment helps make reading meaningful and helps teachers identify weaknesses for the struggling readers. Surely the introduction of financial literacy activities as discussed earlier can help secure a child's attention and not only further reading skills, but also lead to financial understanding that can change the child's adult life.

Conclusion

A proper understanding of finance is a fundamental issue in the United States today, as is reading achievement levels in the classroom setting. Both can contribute to poverty and low socioeconomic status. Research has indicated that individuals who have graduated from high school and are equipped with essential reading and financial literacy skills are less likely to be poor. However, we as a society should not allow the development of these financial skills to remain limited to those blessed with this opportunity. Rather, we must seek to provide this education to all. Current program models of financial education have not been shown to have a definitive effect on financial literacy (Klapper et al., 2016). Reading is the fundamental skill from which all other educational concepts develop. These authors suggest the best course of action is to move forward, introducing financial literacy in an engaging and relatable manner, employing the energy and passion harnessed from this to seek to boost reading skills in the elementary classroom which will ultimately begin to break the cycle of poverty.

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The Impact of Implicit Racial Bias on Students' Grade Point Average in Predominantly White Colleges and Universities

By Edwin Mathieu, Ed.D.

Abstract

This study investigated how students' perceptions of implicit racial bias in predominately White colleges and universities (PWCUs) impact their grade point average (GPA). Grounded in critical race theory (CRT), which challenges racial indifference by uncovering how racial progress often prioritizes White self-interests (Patton et al., 2007), this non-experimental quantitative inquiry employed Asian, Hispanic, and White students as a comparative cohort. Implicit racial bias is a suggestive and sometimes unconscious slight leveled against minoritized groups (Staats et al., 2015). To examine this phenomenon, the researcher devised the Implicit Racial Bias Higher Education Questionnaire (IRBHEQ) to gauge perceptions of implicit bias among students of African descent. The questionnaire surveyed a multiracial group of students at three PWCUs in a large metropolitan area in the northeastern U.S. The research also used a simple linear regression analysis to predict students' GPAs based on their perceptions of implicit racial bias at their college or university. The statistically significant results indicated that the more heightened a student's perception scores of implicit racial bias, the higher their GPA.

Introduction

Implicit racial bias profoundly influences the experiences of students of African descent in the U.S. and on college and university campuses. Implicit racial bias refers to the manifestation of instinctual or deeply ingrained beliefs concerning particular racial or ethnic groups, which means individuals may exhibit racially biased behaviors without openly endorsing racially biased beliefs (Stevens & Shriver, 2024). Implicit racial bias against students of African descent in higher education institutions in the U.S. can be attributed to a complex interplay of historical factors, notably the enduring legacies of slavery, segregation, and pervasive anti-Black sentiments. In this study, the term Black and students of African descent are used interchangeably.

Related Literature

Existing literature has shown how implicit racial bias impacts Black students' GPAs. The literature suggests that student performance improves when educational institutions are led by administrators who adopt a holistic approach, fostering a sense of belonging among students of African descent.

Reynolds et al. (2010) investigated the relationship between racism-related stress and academic and psychological variables in a sample of Black and Latino college students. They found that while GPA was the strongest predictor at PWCUs, the quality of student-faculty interaction was more likely to predict strong academic self-concept at historically Black colleges and universities (HBCUs). Additionally, racism-related stress significantly impacted the academic motivation of Black and Latino college students.

Jacoby-Senghor et al. (2016) used the subliminal priming task to measure how instructors' implicit racial bias impacts students in the classroom. The study aimed to learn whether teachers' unintentional and implicit racial bias produces racial disparities in academic achievement. The researchers found that implicit racial bias detracts from the success and well-being of racial minorities. According to the findings, low performance by minorities was driven by how implicit racial bias influences pedagogical effectiveness in the classroom (Jacoby-Senghor et al., 2016). The research found instructors' implicit bias influenced their lectures and students' future performance. In study one, however, they discovered higher teacher explicit bias was associated with lower learner test performance, but not in study two. The disparity between experiments implies that instructors' implicit and explicit biases affect student learning differently.

A study by Thomas (2017) found more frequent exposure to school-based discrimination in college led to lower academic effects, predicting lower graduation expectations and college satisfaction over time. These results demonstrate the long-term effects of discrimination on the academic achievements of students.

Starck et al.'s (2020) work supported the present research because it proves the need to address implicit racial bias in the post-secondary system. Whitcomb et al. (2021) analyzed ten years of institutional data from a large public research university to examine the grades earned by students based on gender, race/ethnicity, low-income status, and first-generation college student status. The researchers found on average, underrepresented minority (URM) students experienced more significant penalties to their mean overall and STEM GPA than even the most disadvantaged non-URM students. The researchers found that

the trends in GPA for Black students are not qualitatively different from those for other URM students (2021).

According to Whitcomb et al. (2021), these inequitable outcomes point to systemic inequitable structures in higher education, which must be dismantled to create an inclusive learning environment promoting equity and inclusion. The researchers concluded that providing additional resources for low-income and first-generation college students, including financial support, scholarships, and timely advising on academic and cocurricular opportunities, is crucial for leveling the playing field and ensuring that all students excel in college, regardless of race and ethnicity (Whitcomb et al., 2021).

A study conducted by Shakoor (2022) found implicit racial bias negatively impacted nine out of ten participants of African descent in higher education, making them anxious and working harder to meet their academic goals. The literature affirms that racism has real-world repercussions on Black people financially, emotionally, and healthily. Racism tremendously impacts Black people's well-being, and research supports this contention (Boykin et al., 2020).

Methodology

This non-experimental quantitative study examined how GPA was impacted for students of African descents based on their perceptions of culturally implicit racial biases in PWCUs. Typically, researchers who study implicit bias would use a survey similar to Harvard University's *Implicit Association Test* (IAT) to quantify levels of implicit bias among participants. The test measures how quickly people can, for instance, associate people of African descent's faces with positive words versus European American faces with those same positive words (Bartlett, 2017). However, the IAT score does not predict an individual's discriminatory behavior and is not helpful as a diagnostic tool for legal situations (Blanton et al., 2006).

According to Blanton and Jaccard (2017), existing explicit measures of attitudes employed in implicit bias studies are not up to the task. The IAT might miss implicit racial bias because this conduct is often unconscious. Due to this, the researcher developed a new instrument titled the *Implicit Racial Bias Higher Education Questionnaire* (IRBHEQ), specifically targeting and quantifying perceptions of implicit racial bias among students of African descent in academia.

It is unclear if current implicit measures can effectively parcel out unconscious cognition and affect. The research question determined the relationship between Black students' perceptions of implicit racial bias and their grade point average (GPA). The independent variable was the students of African descents' perception scores of implicit racial bias. The dependent variable was the students' GPA scores. A simple linear regression was chosen to predict students' grade point averages based on their perceptions of implicit racial bias. The alpha level of .05 was chosen to test for significance.

Sample and Population

The study drew its sample and population from undergraduate students who attended three private, co-ed higher education institutions in a large metropolitan area in the northeastern United States. The researcher used convenience sampling in the current study. Fraenkel et al. (2010) posit that a convenience sample is a group of conveniently available individuals. The researcher selected participants by connecting with student affairs and student government associations (SGA) groups at each participating academic institution.

A total number of 152 ($n=152$) undergraduate students completed the survey at St. Clare's College 42 ($n=42$), Brookline University 56 ($n=56$), and St. James University 54 ($n=54$). The racial/ethnic demographics included Asian ($n=27$), Black ($n=46$), Hispanic ($n=19$), White ($n=47$), and Other ($n=13$).

Instrument

Section 1 of the IRBHEQ (questions 1 to 7) asked students to provide their gender, age, number of credits earned, undergraduate degree, GPA, major, and race. Section 2 of the IRBHEQ contained 15 questions using a 5-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree). In section 3 of the survey, students completed two open-ended questions asking them about barriers to racial equity and inclusion at their undergraduate institution and how to improve their quality of life on campus.

Procedures for Collecting Data

The researcher collected the data from April 11, 2023, through May 11, 2023, by connecting with gatekeepers, such as staff members in charge of student affairs, faculty, and administrators at Brookline University, St. Clare's College, and St. James University.

A sample of 224 undergraduate students ($n = 224$) received the IRBHEQ using the Qualtrics web-based platform, with the link arriving via email. A total of 72 undergraduate students did not complete the survey. A final sample of 152 ($n = 152$) male and female students, ages 18 and older completed the questionnaire.

Research Question

The research question was: What is the relationship between students' perceptions of implicit racial bias and their grade point average (GPA)?

The hypotheses chosen were:

H0: There will be no significant relationship between students' perceptions of implicit racial bias and their grade point average (GPA). $b = 0$.

H1: There will be a significant relationship between stu-

dents' perceptions of implicit racial bias and their grade point average (GPA). $b = 1.0$.

The data had no multicollinearity as the VIF score was below 10 (total perception score = 1.0), and tolerance scores were above 0.2 (total perception score = 1.0). The residuals' values were independent, as noted by the Durbin-Watson statistic, which was close to 2 (Durbin-Watson = 2.072). The variance of the residuals was constant, which was identified by the plot showing no signs of funneling, which suggests the assumption of homoscedasticity has been met. The values of the residuals were normally distributed, evidenced by the P-P plot. Finally, no influential cases of biasing or outliers were evident in the data, which was verified by calculating Cook's Distance values, which were all under 1.00.

The researcher ran a simple linear regression analysis using SPSS, and the correlation of the independent variable (total score) was significantly correlated with the dependent variable, GPA, $r = .176$, $p = .015$. A significant regression equation was found $F(1, 150) = 4.82$, $p = .030$, and accounted for approximately 3% of the variance of GPA, ($r^2 = .031$, adjusted $r^2 = .025$). A total perception score ($\beta = .176$, $p = .030$) predicted a student's GPA.

Implications of Findings

The quantitative findings support the fundamental concepts of critical race theory (CRT). The mean GPA for Black students is 3.322, which is lower than that of other racial groups in the sample. This suggests that their perceptions of implicit racial bias on campus may impact their GPA. However, the differences are not statistically significant, indicating that race alone does not explain the variation in GPA. Other factors, such as socioeconomic status, access to educational resources, and individual circumstances, may contribute to the differences observed. Like Campbell et al.'s (2019) study, the current research found that race matters at the individual level in colleges and universities, and campus climate impacts groups differently.

Lastly, the setting in which students filled out the questionnaires may also have restricted the generalizability of the results to other academic and private institutions of higher education. Brookline University, St. Clare's College, and St. James University were all institutions in a large city; this could have impacted students' perceptions of diversity, equity, and inclusion. Institutions in highly diverse locations may influence these outcomes because studying in a multicultural learning environment helps students better understand people whose experiences and viewpoints are different from their own (Paredes-Collins, 2009).

Based on the findings and conclusions of the study, the researcher recommends the following for practitioners and policymakers. Post-secondary institutions might benefit from introducing asset-based approaches that acknowledge and appreciate the knowledge and skills students bring to

the classroom through their social and community networks, much like Spelman College (Younge et al., 2021). Another recommendation is to work with students and faculty to explore and dissect the culture that continues to make students of African descent and underrepresented students feel left out or unseen, unheard, and underrepresented.

Conclusion

This non-experimental quantitative research examined how students' GPA was impacted by their perceptions of culturally implicit racial biases in PWCUs. The quantitative data from the questionnaire indicate that to genuinely support students of African descent, colleges and universities should employ an asset-based approach to education, provide professional development for a diverse student body, faculty, and staff, and teach from various perspectives. Breese et al. (2023) posit that educators benefit from professional development, continuing education, and training on biases, diversity, and multiculturalism taught through a CRT lens to help learn specific interventions and practices to serve students better (p. 11).

The findings support the fundamental concepts of critical race theory, which maintains that racism is the norm in the U.S. educational system, liberalism's pursuit of justice and equality diverts attention from White people's need to acknowledge the benefits they obtain from a racialized society they created, White people profit from legislation purportedly passed to assist Black people, CRT is an essential field of study for educators, and CRT continues to evolve, and that educators should recognize how under-standing race and racism is necessary for a globalized society (Razack & Jeffery, 2002).

According to Griffin et al. (2016), students of African descent report more visible and perceived incidences of racism on college and university campuses than their White peers, making perceptions of implicit racial bias a key area for research. This is made worse by the fact that race was the motivating factor behind 55 percent of all reported hate crimes (314 incidents) at postsecondary institutions in the U.S. (National Center for Education Statistics, 2023). The research acknowledges and concludes that racism and White supremacy is ingrained in the culture and academic system of the United States.

For example, Florida's Stop W.O.K.E. Act, a law limiting what schools, universities, and workplaces can teach about race and identity (Bennion, 2023). Books written to highlight White supremacy and uplift minoritized people are being banned all across the country. On June 29, 2023, the same legacy of racism and segregation led the United States Supreme Court to end race-conscious admission programs at all colleges and universities as a result of the *Students for Fair Admissions, Inc. v. the President and Fellows of Harvard College and Students for Fair Admissions, Inc. v. University of North Carolina et al.* cases. The Supreme Court ruled 6-3 that the admissions policies utilized by Harvard College and the

University of North Carolina violated the Constitution's equal protection clause. Colleges and universities attempted to bridge the gap and remove obstacles to higher education for African Americans through affirmative action programs. It was an effort to right the wrongs of more than 200 years of slavery, racial discrimination, and White supremacy in the United States. Although colleges and universities cannot alter their histories of exclusion, they can take meaningful steps to promote diversity.

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The Future of Peer-to-Peer Education: The Student Perspective

By Gabriella Franza, Ed.D.,
and *Student Writers*: Morgan Jackson,
Mia Randazzo, Jordan Hall, and Maekyla Massey

Introduction

The proctor model of peer-to-peer education has long been the subject of extensive research, especially in areas like mentoring, tutoring, cross-age support, and differentiated learning. Bond and Castagnera (2006) even described it as a highly underutilized resource in promoting inclusive education within our schools. In the 1980s, Damon (1984) studied peer tutoring and collaboration, showing its impact on self-esteem, behavior, and academic achievement. However, much of this research has focused on student teachers who are working with a predefined curriculum or are educating peers in subjects they are already studying. Looking ahead, the true potential of peer-to-peer education lies not only in expanding beyond the traditional peer tutoring model in K-12 public schools but also in implementation of student-created curriculum and lesson plan sequencing. Providing students the tools to create their own study plans, based on a good understanding of teaching methods, does not just help them follow through with peer-to-peer education—it helps them connect with the 'whys' of their daily learning.

The Program

When students learn from each other, particularly when a high school student educates a middle schooler, the impact on how a subject is perceived can be great. A study titled "Formative Research on Youth Peer Education Program Productivity and Sustainability" by Svenson and Burke ((2005) revealed that youth-lead education increases young people's "decision-making skills, self-esteem, motivation and proficiency in fulfilling their responsibilities" (p. 54). From a theoretical standpoint, this study will look at Albert Bandura's social learning theory, which explains that people learn behaviors and actions through observing others (Bandura, 1977). Bandura further explains how these observations are subconsciously stored and influence how we interact with others. When high school students share their behaviors, cognitive ideas, and passions, their impact often goes beyond just the lesson.

In a New York public school, students participated in a program where they created their own curriculum using the

understanding by design framework (UbD) (Wiggins & McTighe, 2005). The students, in grades 10-12, were trained to plan and implement this curriculum, with adjustments made to account for their various levels of experience with educational theory. Additionally, two students received specialized training by Santone (2018), using *Reframing the Curriculum: Design for Social Justice and Sustainability* to introduce social justice concepts to their peers. With both the social justice and curriculum narratives, students were able to develop lessons about social responsibility, which they shared with middle schoolers. The program did not stop at their own district; the students also visited other schools, teaching their peers how to create and implement their own lessons and curriculum.

The Beginning

The students were eager to raise awareness of social issues such as cyber bullying, news literacy, and online safety—not just in their own school district but in others as well. Rather than teaching these topics directly, they chose to create lesson plans, training guides, and interactive curricula that other schools could easily replicate. Their project was about creating an accessible guide that could help other schools implement the program, and they directly collaborated with these schools during training sessions to ensure they could run the program on their own. Instead of simply educating others, the group decided to create an initiative that would allow multiple school districts to take charge and teach the curriculum themselves. Their experiences and stories are shared here.

The Student Perspective: Experience as a Peer-to-Peer Educator and Curriculum Collaborator

Student One

Throughout my time in the school district, I became deeply involved in my community and wanted to be effective for the children in our town and in other schools as well. It was especially important for me to make sure that I left a lasting impact on the middle schoolers in my town. While considering this idea, my peers and I created a curriculum that allowed us to teach middle school students about the

importance of social media safety. Creating these lessons taught us significantly more information about the importance of social media safety for middle school children as it was a major issue. When we went into our middle school to teach these lessons, I felt like we were creating the next generation of social change agents. Standing at the front of the classroom was a completely unique experience from being on the receiving end of education. Although instructing these students was exciting and inspiring, I believe that this experience did show me challenges that peer educators may have in the classroom. While most students were very engaged and interested, there were some who were distracted and did not find interest in this subject. Nonetheless, teaching these students was extremely beneficial to the community and it taught me leadership skills and how to be an agent of social change.

Student Two

Going through school, I found it difficult to truly connect with my teachers, especially when they tried to relate to what I was going through, whether academically or personally. Even though I was sure my teachers had been my age once, it simply did not feel like they really understood. Times have changed-social media was not the all-consuming presence it is now, and schools managed issues differently back then. So, when I got the opportunity to gain experiences and bring awareness to these issues alongside my peers and middle school students, it was absolutely life changing. For the first time, I really understood what my older figures meant when they said, "a little goes a long way." I honestly believe this entire "project" as some may call it, was effective not just for the middle schoolers, but for my peers and me as well. In addition, I felt more connected to the community, and it was a game changer to take on the role of someone older and more experienced, someone the younger students could look up to.

Student Three

Transitioning from being a student to becoming a student educator was both overwhelming and incredibly rewarding. It is quite a big leap to go from being the person who receives information and then applies it in exams and class discussions to being the person who must understand the material, consider different perspectives, and decide how best to present it. This is an uphill battle for anyone who has never been in such a prominent position. However, this is not the most daunting task, especially if one considers the fact that grasping the content is only incredibly useful if you can get your peers to be receptive. But the challenge was not just mastering the content-it was understanding what the community needed and how to meet those needs. This can be tough if you are not actively listening to or engaging with the people you are hoping to educate. Fortunately, in my case, I had a good grasp of my community's needs because I have been part of it for nearly a decade, participating in several community-based organizations. But even then, it helped immensely to talk with people and conduct surveys to pinpoint the issues they cared about most. In my high school, that issue turned out to be media literacy. I, alongside my peers, had the opportunity to discuss with teachers

and eighth grade students about what they thought was most pressing for our community, which made it easier to create a lesson plan that was both relevant and impactful. We took otherwise broad concepts and specified them to fit our community, which made my peers care more about social media usage and truly limit the repercussions of it. Now, if I am to remain honest, the chance to create something meaningful for my community and to lay the framework for future generations was a great honor. I had the incredible opportunity to lead discussions and engage with people I may have never interacted with prior to this experience. It was eye-opening to see the fact that while information and statistics are powerful, they only encourage action when they are connected to significant issues that people care about.

Student Four

As a student educator in my community's school district, I experienced firsthand how peer-to-peer education can shape both the educators and the next generation. As a student in middle school, I remember always admiring high school students who would visit to teach us about important topics such as drug and alcohol use, and sex education. Those valuable lessons taught by students only a few years older than me left an impression and inspired me to become a peer educator myself.

Creating and teaching a carefully curated thoughtful lesson on important topics like social justice put me in a position of influence, something I did not take lightly. In our community, where racial minorities are the majority, lessons on social justice are crucial, yet they are often overlooked. Our lesson plans invoked immense cultural awareness, curiosity, and engagement among the students. Through interactive activities such as role playing, we encouraged students to visualize themselves as catalysts for change. Witnessing students who were once disengaged become curious and take on leadership roles has shown me just how powerful peer-to-peer education programs can be.

What is the Future of Peer-to-Peer Education?

Looking at the collaborative experience that these students had with this program, they not only gained valuable teaching and learning experiences but also developed their own views on the future of peer-to-peer education. As its success continues to grow, so does the importance of considering its future. Here are their thoughts on the direction and potential of this educational approach:

The Student Perspective: The Future of Peer-to-Peer Education

Student One

As the world continues to change, our education system needs to adapt to meet the needs of students. Peer-to-peer education is a delivery method that children are not often exposed to, and it can be fun and more engaging. The students feel more at ease around people within their age range, and in our experience, they showed a genuine interest in the lessons we taught. This approach can be extremely

beneficial to students who may not be receptive to traditional teaching methods. Peer-to-peer education should be implemented in every classroom because it encourages curiosity and opens new ways of understanding. In our classroom sessions, students were eager to ask questions about high school, and because we were living that experience, we could provide them with real, relatable answers. Implementing peer-to-peer education teaches students leadership skills and how to take control without being authoritarian. It shows them to be leaders and different strategies to encourage children to engage in lessons. An adult should supervise peer-to-peer education, but it is important that children are able to teach other students within their age range. This will improve the leadership skills of children who are reluctant to take leadership positions.

Student Two

In my opinion, peer-to-peer education has a promising future, especially if more communities begin to utilize the opportunities it brings. Although one might argue that peer-to-peer education should already be a common utility currently, the opportunity to be among the pioneers in implementing it-especially with younger students-is immensely beneficial. If enough people collectively work to broadcast peer-to-peer education and show the rest of the world or even a neighboring town its benefits, anyone can make the world just a little bit closer to our "next step" whatever that may be. Peer-to-peer education is the sort of topic and method that is not talked about enough and is rarely used. People often tend to downplay the usefulness of peer-to-peer education as well as dismissing anything related to it and not even knowing what it is. It is such a hidden gem that should have some more light shed on it.

Student Three

The future of education lies in peer-to-peer education. As a student, it is clear to me that a generational gap between teachers and their Gen-Z students creates friction in the classroom, making it nearly impossible for teachers to engage us in meaningful discussions. This disconnect could have profound consequences, as school is where children learn to challenge the status quo, embrace idiosyncrasies, and most importantly shape the future of society. Therefore, if teachers are not able to reach their students or compel them to dig deeper and go beyond what is required, we are setting ourselves up for failure. We are raising a generation that is ill prepared to lead. It is for that precise reason that peer-to-peer education will and must be the future of education. Peer-to-peer education works in marvelous ways, ways in which the traditional lecture style or even more modern conventional ways fail to connect with the harshest critics of educators and students. Peer-to-peer education, if widely adopted in schools around the country and perhaps the world, would create a norm in which the educator becomes more of a coach guiding conversations and learning, offering support while allowing students to take the lead. In fact, in this new model of education, students would step into the role of educators. With their teachers' guidance, they would be responsible for researching topics, discussing

them with their peers, and selecting the most effective ways to present the information. The belief is that by taking on the role of researchers, students will gain experience in managing their own learning. This process teaches them the importance of media literacy, a skill that is increasingly critical in today's digital world. This would in turn help them with public speaking, developing responsibility, and overall analytical skills. They would need to study their peers' learning preferences- deciding whether a video or a hands-on approach would be more effective. Overall, the future of peer-to-peer education envisions teachers as facilitators who keep students on task and ensure the information, they are presenting is accurate. However, the students take charge of how the information is presented and discussed, making it their responsibility to engage their peers and lead the learning process.

Student Four

The future of peer-to-peer education relies on the dedication of students and educators who are committed to implementing the program in their school districts and beyond. Without enthusiastic advocates pushing for its continuation and expansion, the initiative could falter. However, given the increasing recognition of its benefits, I am optimistic that peer-to-peer education will see broader adoption. I foresee policymakers directing more funding towards peer-to-peer education programs. These programs are vital for the success of students both in and out of the classroom. Embracing peer-to-peer education can transform student lives and is a powerful method for nurturing the leaders of tomorrow.

Student Conclusions

These reflections illustrate a significant shift in perspectives we have on education and underscore the importance of incorporating student voices into curriculum development. We, as students, experienced a profound change, not solely because we influenced our school environment, but also due to their active role in creating the lessons we delivered. Unlike traditional programs, where students might have adhered to a predetermined script, this experience provided us with the autonomy to develop material that resonated with them personally. This autonomy fostered a deeper appreciation for the complexities of teaching, including lesson planning, goal setting, and designing engaging activities. Observing the impact of our contributions on classroom dynamics proved enlightening. Furthermore, witnessing other schools' interest in and eagerness to learn from their work was notably gratifying. This external recognition affirmed that efforts to effect change were acknowledged by both peers and adults beyond their immediate community. These reflections suggest that peer-to-peer education is a vital component of K-12 education. However, it is not merely about student participation; their input is crucial in the development of educational programs. While curriculum development requires professional oversight, incorporating student perspectives is essential for fostering a genuinely student-centered learning environment.

Synthesized Themes from the Student Perspectives

Awareness of Inherent Capabilities

Students articulated that becoming peer educators allowed them to recognize and leverage their existing skills and knowledge. Rather than needing empowerment, which implies that there needs to be power given, they emphasized the importance of awareness—understanding that they already possess the ability to teach and inspire their peers. This realization not only boosted their confidence but also facilitated genuine connections with younger students and making change for their school community.

Relevance and Community Engagement

The development of curriculum tailored to the specific needs of their community highlighted the importance of relevance in education. Students actively engaged with their peers and school staff members to identify pressing issues, such as social media safety. This approach ensured that lessons were not only informative but also resonated with the students, making the learning experience more impactful.

Innovative Learning Environments

By utilizing peer-to-peer education, students were able to experience a new type of learning on both sides—from both the student educators and for the students for which they were educated. They were able to learn in a new way that is not typical of their daily learning environment and, because they were visiting a different school, felt special. The students could not wait to go back.

Future Directions for Education

The students collectively envisioned a future where peer-to-peer education is a fundamental component of learning. They stressed the need for educational systems to adapt, emphasizing the role of educators as facilitators rather than sole providers of knowledge. With increased support and advocacy, peer-to-peer education could reshape educational practices, preparing students not just academically but as responsible, engaged citizens capable of leading future societal change. The students hoped that this type of education could be integrated into their other classes, making a change to the typical structure of the lessons they experience, as well as helping them feel like they have a voice in what they are learning.

Benefits for Students

Enhanced Understanding of the Educational Process

Engaging in peer-to-peer education helps students gain a deeper insight into how education works, including lesson planning and delivery. By taking on the role of educators, they learn the intricacies of crafting effective curricula, which enhances their overall educational experience.

Development of Writing and Planning Skills

Creating lesson plans and educational materials allows students to look at the writing process, to ensure that their materials can be understood by their peers and educators. This experience not only improves their ability to articulate ideas clearly, but also teaches them how to structure information logically and engagingly. By having professional oversight, having the authentic assessment of highlighting that lesson to their younger peers and receiving feedback, they can see the outcomes of their writing process in action.

Development and Strengthened Leadership and Communication Skills

Peer education encourages students to develop essential leadership and communication skills. Through this experience, they practice public speaking, active listening, and collaboration, preparing them for future academic and professional endeavors.

Benefits for Faculty Members

Deeper Relationships with Students

Implementing peer-to-peer education fosters closer relationships between teachers and students. Students, through their working side by side with a teacher, get to understand what needs to be accomplished in a lesson and the thought process behind lesson preparation. In turn, educators gain insights into students' personalities, strengths, and interests, leading to more personalized learning and understanding in the classroom.

Improved Understanding of Student Needs

Faculty members can better understand the challenges and concerns faced by their students through the peer-to-peer education model, as well as through collaborative curriculum writing. By working with students to identify relevant topics, teachers become more attuned to the specific needs, as well as a firsthand understanding of what students enjoy and are relating to it.

Opportunities for Professional Growth

Teachers can learn from their students' perspectives and innovative approaches to education. This exchange fosters a culture of continuous improvement, allowing educators to adapt their teaching strategies and curricula based on real-time feedback from students. This can inspire teachers to attend professional development that attains to the student recommendations, or to do their own research on these same subjects. There are so many varied materials, models, programs, and development agencies, which can be overwhelming. This program can help teachers develop a focus on what professional growth models they want to invest in to better their classroom.

Recommendations for Action

Looking at the student conclusions for their participation in this work, the following recommendations are made when looking at innovation in peer-to-peer education and curriculum development.

Establish Student Curriculum Committees

Schools can create student curriculum committees at various educational levels to provide input on curriculum development. For many schools, curriculum writing takes place between adults and professionals in the field, with, in many times, often based on historical data, past experiences, or perceived trends within the field. However, this approach may overlook current student interests and needs, particularly when looking at the demographics of students in each community. Communities are ever evolving, so by integrating student voice into their programs the curriculum reflects contemporary student perspectives and preferences.

Student Think Tank Sessions for the Needs of the Community

As stated in the introduction, peer-to-peer education has proven impacts on student learning, however, many of the pre-written programs do not address the specific needs of the school community. For student think tanks, student participants can propose specific peer-to-peer programs, such as tutoring, mentorship, or other project-based initiatives. They can also suggest ways to structure these programs to maximize their impact, such as creating training modules for peer educators or developing assessment methods to gauge effectiveness. Student think tank sessions can play a crucial role in developing peer-to-peer education programs that are specifically tailored to the unique needs of a district at any given time. By leveraging the perspectives and creativity of students, these sessions can generate customized solutions that address current challenges and opportunities within the district.

Implement peer-to-peer Education Programs Specialized to School Communities

Peer-to-peer education groups, classes and clubs can be implemented at every school level, depending on the needs of the school and the resources available. This group challenges schools to utilize this format in ways more creative and, potentially challenging, than peer tutoring and in the classroom. Having different grade levels and school levels collaborate on a regular basis can help those that are both the educators and the students. Social Learning Theory suggests that peer education can influence students tremendously because it can utilize social structures to teach and model behaviors, as well as content. Having a high school visit a middle school, as done in this model, can utilize this social structure to influence change and teach new topics. (Green, 2001).

Implement peer-to-peer Education Amongst Different Schools

Peer-to-peer education within the community can help support the learning needs of the school. However, to increase diversity of thought, having peer educators travel to different schools, where students can interact with neighboring communities that may not have the same demographics at their current school setting. In most situations, school districts are competing, whether it be in sports, science competitions, mathletes, or other forms of competitive projects. Promoting collaborative classrooms, between grades and schools, can not only help build new relationships amongst diverse student bodies, but also support networking and the building of social capital, as outlined through network theory (Lin, 1999).

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From Study to Story: Transforming a COVID-19 Literacy Learning Loss Research Study into Children's Literature

By Rachel Yudin, Ed.D.

Abstract

The purpose of this study was to examine literacy achievement in an intermediate school in New York, for a third-grade cohort not meeting state benchmarks, and the potential exacerbation of this problem due to the COVID-19 school closures. Utilizing ecological systems theory as a framework, contributing factors such as the impact of a global pandemic, the home literacy environment, parental education, parent and student attitudes toward reading, teacher self-efficacy, and reading instructional approaches were examined. A mixed methods needs assessment was conducted to investigate teachers' perceptions of literacy learning loss, student reading achievement pre-and post-school closures, as well as the home literacy environments of the sample. The quantitative data revealed that the students outperformed themselves from the year prior as well as third graders dating back to 2016. Further, many students had access to strong home literacy environments during the pandemic. However, the qualitative data from third grade teacher interviews suggested a perception of literacy loss as well as an identified lack of connection with students during the closures. To address this discrepancy, and to share the results of the study, a children's book titled, *Unprecedented* was developed. The book aims to 1) share the research outcomes of the needs assessment, 2) honor the potential mitigating role of the home literacy environment, and 3) provide a tool in which students can discuss and reflect on their own experiences of learning during the school closures. The children's book titled, *Unprecedented*, aims to target both adult and child audiences. This book depicts the story of the study along with the unexpected outcomes and possible reasons for the outcomes. The book includes an introduction and study guide to support the targeted audience in using the book to explore difficult content and form connections, while recognizing the value and influence of the home literacy environment during quarantine.

Introduction

The COVID-19 pandemic of 2020 resulted in mandated school closures across the United States. During this time, instruction moved to online platforms and teachers, students, and families needed to adjust to virtual instruction

during the crisis which impacted students and student literacy achievement in a variety of ways. According to the New York State guidance plan for Response to Intervention in grades K-4, 80% of students should be reading at or above grade level in reading if appropriate curriculum and instruction are in place (New York State Education Department [NYSED], 2010). However, several factors including, but not limited to access to rich literacy home environments (Tichnor-Wagner et al., 2016), preschool attendance (Valenti & Tracey, 2009), teacher self-efficacy (Arrow et al., 2019), and summer setback all have implications on student literacy performance. School closures during the COVID-19 pandemic may have parallel consequences as summer setback, particularly for students from low socio-economic households who have historically performed lower than their non-disadvantaged peers (Allington et al., 2010). When school is not in session during summer, the accessibility gap increases affecting performance year after year. The 2020 COVID-19 school closures may have added a new layer of inequity, and Wyse and colleagues (2020) predicted a significant impact on learning and achievement specifically in the core subjects of math and reading.

Theoretical Framework

Ecological systems theory (EST) provides a structure in which to organize contributing factors as it relates to literacy achievement and the impact of school closures during a global pandemic. EST suggests a complex nested set of systems which impact a child's development. In order to understand why students were underperforming, the researcher first explored potential contributing factors using the ecological systems theory (Bronfenbrenner, 1992). Literacy achievement is impacted by a variety of factors within different levels of the system impacting the child. The home literacy environment (Tichnor-Wagner et al., 2016), parent (Partin & Hendricks, 2002), and student attitudes towards reading (Roman & Pinto, 2015), preschool attendance (Valenti & Tracey, 2009), teacher self-efficacy (Arrow et al., 2019), parental education (Myrberg & Rosen, 2010), and reading instructional approaches (Squires & Bliss, 2004) contribute to literacy development and literacy success.

Table 1		
<i>Ecological Systems Theory and Potential Contributing Factors</i>		
Layer of EST	Description	Factors Influencing Literacy
Chronosystem	historical events and life transitions	global pandemic, traumatic event
Macrosystem	laws, policies, and cultural ideology	stay home orders, mandated school closures, reading wars
Exosystem	child's neighborhood and community	Media surrounding pandemic, learning loss predictions, literacy trends
Mesosystem	home and school relationship	virtual learning, teacher self-efficacy, culturally responsive competencies, preschool attendance, parental and student attitudes to reading
Microsystem	immediate home environment	home literacy environment, parental education, parental and student attitudes to reading, preschool attendance

School closures as a result of traumatic life events (Gershenson & Tekin, 2018) can also impact learning and achievement. The spheres of influence that were the focus of this study are the chronosystem and the microsystem. The chronosystem, which represents the outermost layer of the five systems includes historical events and life transitions that could potentially impact literacy learning loss. In this case, attention is given to the global pandemic as a historical event. At the core of ecological systems theory is the microsystem. This is where nurturing and family relationships occur. The microsystem includes the child's immediate home environment, which had a dual role as the school environment during the pandemic closures. **Table 1** lists the layers of EST and the corresponding factors that lie within each of the layers that could potentially impact literacy achievement.

Review of the Literature

On March 11, 2020, the World Health Organization (WHO) declared the COVID-19 outbreak as a global pandemic. It is the first global pandemic experienced by children born on or after the H1N1 pandemic between 2009-2010. On March 15, 2020, states began closing schools and local agencies, and by March 28, 2020, the federal government issued a stay-at-home order with social distancing guidelines (Centers for Disease Control [CDC], 2022). On March 16, 2020, the Governor of New York mandated all schools to close for at least two weeks. This executive order was extended approximately every two weeks thereafter until an

official order on April 11, 2020, when he declared that schools would remain closed for the remainder of the school year. With the closing of schools because of the local and federal mandates, the school experience was interrupted. When schools are closed for any reason, learning may be impacted. This includes closures due to summer breaks (Alexander et al., 2007), natural disasters (Gibbs et al., 2019), and pandemics (Braunack-Mayer et al., 2013). In studies on school closures, research has found that when students are on long breaks from school, learning loss is probable. Entwisle et al., (1997) established the concept of faucet theory in connection to the summer setback when schools are closed as well. Faucet theory is the idea that students from low socio-economic backgrounds find themselves at a significant disadvantage when schools are closed during the summer months resulting in a total shut-off from resources. Although schools were still operating during the COVID-19 school closure, a parallel may be drawn to the reduction of resources and possible impact on student learning as demonstrated by the faucet theory. The shift to online instruction and learning may also have implications on student achievement. During the COVID-19 pandemic, König et al., (2020) surveyed German teachers who switched to online learning as a result of the school closures. Several challenges were reported as obstacles that interfered with student learning including technology issues, communication barriers, and difficulties in identifying appropriate assessments. In addition to the shift to online learning, the home literacy environment played a vital role during school closures. The home literacy environment,

Table 2			
Fall STAR Scores Grade 3 cohort of 2020–2021			
	Percentile Rank Range	Fall 2019, 2nd Grade (n = 109)	Fall 2020, 3rd Grade (n = 124)
Urgent Intervention	10 or below	41 (38%)	17 (14%)
Intervention	10–24	0 (0%)	14 (11%)
On Watch	25–39	27 (24%)	20 (16%)
At or Above Benchmark	40 or above	41 (38%)	73 (59%)
Total		109 (100%)	124 (100%)

early exposure to literacy and preschool attendance, as well as parent attitudes toward literacy is critical for literacy growth (Doyle, 2013; Rhode, 2015). Emergent literacy theory suggests that early exposure to literacy concepts such as letters and sounds, and consistent literacy activities in the home provides the foundation for literacy success in young children (Rohde, 2015). Considering the impact of the home and its relationship to emergent literacy, the literacy growth of the students during the months of quarantine and stay-at-home order may have been heavily influenced by the literacy practices in the home. Access to books, attitudes towards reading (Niklas et al., 2020), as well as literacy practices in the home situated within the child's microsystem may have influenced achievement during the months that schools were closed.

Research Design and Methodology

The study was conducted at Grace School (pseudonym), a suburban intermediate school located 26.5 miles from New York City. Grace School serves 379 students in grades three through five. Within the school, 33% qualify for free or reduced lunch and 62% qualify for transportation services because they reside eight tenths of a mile or more away from the school building. Study participants included third grade students (n=124), third grade parents (n=63), and third grade teachers (n=10) during the 2020-2021 school year. Student achievement, parent feedback, and teacher perspectives were collected via three individual instruments. The STAR reading assessment was used to evaluate reading achievement. The Progress in International Reading Literacy Study (PIRLS) home survey was used to collect information about home literacy activities. Teacher interviews were conducted to investigate teacher perceptions and observations regarding literacy performance in the classroom. Each set of data was collected individually within a four-week period during the last month of June of the 2020-2021 school year. Methods for collecting

achievement data included accessing existing student achievement scores for the current school year as well as scores from previous cohorts from previous years. Parent survey data was collected digitally via email and online responses, and teacher interviews were conducted and recorded with permission via a video conferencing platform. A mixed analysis was conducted by examining student achievement scores and how they relate to the teachers' perceptions of student achievement. Additionally, parent responses about the home literacy environment were utilized to inform potential trends in the data. Existing STAR data for the 2020-2021 school year was retrieved along with prior data from the participating cohort and six cohorts dating back to 2016. The achievement scores were then compared to the teacher reports that were collected during the interviews to assess if the perception of student achievement aligned with the achievement data. The survey results were then examined to provide insight as to why there may have been a convergence or divergence between the quantitative achievement scores and the qualitative teacher feedback. The researcher developed a theme to capture the mixed findings.

Data Analysis

The STAR data indicated that the 2020-2021 cohort performed better at the start of third grade than they did at the start of second grade, one year prior to the COVID-19 school closures. At the start of second grade (2019-2020), 38% of the cohort was categorized at or above benchmark, whereas 59% fell into the same category the following year (2020-2021). The data also indicates 24% less students were labeled as in need of intervention during the fall 2019 administration as compared to the fall 2020 testing. As indicated in the scores in **Table 2**, the students performed better after the closure than before the pandemic. Additionally, scores from cohorts dating back to 2016 were compared to the 20-21 cohort.

Table 3			
Mean Fall STAR Scores Grade 3 Performance 2016–2020			
	Percentile Rank Range	Fall 2016–2019, Mean 3rd Grade (n = 447)	Fall 2020, 3rd Grade (n = 124)
Urgent Intervention	10 or below	13% (n = 58)	14% (n = 17)
Intervention	10–24	16% (n = 72)	11% (n = 14)
On Watch	25–39	18% (n = 80)	16% (n = 20)
At or Above Benchmark	40 or above	54% (n = 241)	59% (n = 73)

The data in **Table 3** indicates that the percentage of students performing at or above benchmark in the Fall of 2020 was higher than the mean of the students performing in this category from 2016 to 2019.

The home literacy survey, submitted by parents of the student participants indicated that they had a substantial number of books in the home including both children's and non-children's books. Twenty-one (34%) participants reported owning 26-100 books, and thirty-seven (58%) participants reported the same number range of children's books. All (n = 63) parents who completed the survey indicated having at least one digital device in the home. Further, 100% of all participants indicated having at least one non-school issued digital information device in the home including a computer, and only eight participants (13%) reported not having a digital eReader in the home. Six parents (10%) reported spending less than one hour a week reading, while 35 (56%) indicated that they spend one to five hours a week reading at home. Twenty-five (40%) participants said they read for enjoyment everyday while n = 11 (17%) reported never or almost never reading for pleasure.

Finally, using emergent coding, the qualitative teacher interviews revealed that all teachers perceived their students to be weak in the area of reading and attributed this to the school closures. All of the teachers who participated in the interviews reported that the 2020-2021 third grade cohort was underperforming as compared to their previous classes. An apparent discrepancy between teacher perception of student performance as compared to actual achievement scores was found. The expected learning loss (Haeck & Lefebvre, 2020; Wyse et al., 2020) in the area of literacy as a result of the school closures did not occur as expected and contrary to teacher reporting of skill deficits, the students performed better than they did the year prior as well as compared to previous cohorts. Teacher perceptions of declined student performance at the start of the school year may have been influenced by their own feelings of self-

efficacy and instructional competence during the pandemic (Jelinska & Paradowski, 2021). Teachers may have transferred their own feelings of stress onto their students, assuming a learning loss or skill decline that was nonexistent. Additionally, teachers' reports of feeling connected to their students as a result of small class size should be noted as the lack of connection may have led to the perception of skill decline. Teacher reporting of feeling disconnected or unable to meet individual needs may indicate a reason for the perceived learning loss. Additionally, it is critical to note that the home literacy environments, in which the students had access to books, digital readers, and other reading materials in the home during quarantine may have contributed to the lack of learning loss during the four-month closure.

Merged Findings

The merged findings are captured by the theme, discrepancy between actual and perceived learning loss. Teachers perceived students entered third grade with weaker reading and literacy skills than previous years. For example, teachers stated; "I would say that overall, their levels were lower than we have had in the previous years" (Teacher D, personal communication, June 2021), and "There was definitely a big difference in their skills coming in this year. I felt that we had to catch them up a lot" (Teacher E, personal communication, June 2021). However, the achievement data revealed otherwise. Students performed similarly and slightly better than previous third grade cohorts (4% above the mean of all five cohorts). The discrepancy between the lack of literacy loss as determined by achievement scores and the perceived learning loss by teachers could be attributed to assumptions and negative expectations about how students would perform after a school closure and during a pandemic. According to a study on perception and mental health by Lizana and colleagues (2021), the COVID-19 pandemic has increased stress, feelings of burnout, exhaustion, and cynicism amongst teachers. Therefore, the negative perception of performance may have been influenced by these feelings

along with the assumptions and predictions made by most educational publications and online resources (Haeck & Lefebvre, 2020; Wyse et al., 2020).

A bias toward formal learning in a structured setting may have also influenced teachers' perceptions about achievement after the school closures. Formal learning or formal education is defined as traditional in-school structured instruction (Schugurensky, 2000) and was interrupted by COVID-19. Informal learning occurs outside of the traditional school setting and acquisition of knowledge is obtained through experiences and real-life application (Smith, 2021). During the closures as a result of the pandemic, students were engaging in a variety of informal learning experiences at home which may have resulted in the lack of skill decline indicated in the STAR data. Further, students likely engaged in family culture activities, such as cooking, shared dinnertime, and family discussions about values which offered informal learning opportunities (Serpell et al., 2002).

The second merged theme is mitigating factors related to the home and literacy development. The mitigating role of the home literacy environment and pre-school instruction may have also played a role in students' literacy achievement during the COVID-19 school closure despite teachers' perceptions. The parents in the study all reported having access to digital devices and 58% reported having 26-100 children's books in their homes. Further, all but two students attended preschool.

While teachers perceived a decline in literacy skills at the start of the 2020-2021 school year that they attributed to the pandemic and academic disruptions, they also reported progress throughout the remainder of the school year. Growth and achievement of the same students was attributed to *small group instruction, small classes, and the ability to connect with students*, which have been shown to improve students' academic performance (Hehir et al., 2021).

An Unprecedented Story

The unexpected findings of this study were the catalyst for the development of a children's book titled *Unprecedented*. The book reflects the actual events and data revealed in the study and includes a guide for teachers, parents, and students that encourages dialogue and discussion. The rationale for writing this book includes an exploration of the value of using children's literature to teach complex topics (Welsh Kruger et al., 2020), an effort to address the student-teacher connection and expectation bias the data revealed (Niemi & Kousa, 2020), and a section to honor the home literacy environments of the students included in the data collection during the COVID-19 pandemic (Read et al., 2022). The book also serves to honor the shift in literacy practices that occurred during the school closure. In addition to virtual instruction the teachers provided, the students were engaging in traditional and new home literacy practices. Anderson et al., (2010) discussed the socio-cultural perspective of the family literacy environment and how it can

evolve based on the home, school, and community. Utilizing Bronfenbrenner's ecological systems theory, the authors described the family literacy environment critical to development and personal experience. During the closures, the students' literacy environment shifted to include digital media, virtual instruction, and a variety of at-home activities and family culture practices such as shared dinnertime (Serpell et al., 2002), which may have impacted the students' literacy success. In conjunction with text referring to the rich home literacy environments in which the students reside, the illustrations in the book depict family dinners, family cooking, family game night, and a variety of other family interactions as a celebration of the varied interactive literacy activities that occurred in the home during quarantine. These illustrations also aim to honor the informal learning that may have happened during these family interactions (Bourke et al., 2021). The illustrations also include bookshelves lined with books, digital readers, and newspapers throughout the homes as a direct reflection of the data reported in the parent survey. *Unprecedented* includes an accompanying discussion guide that all readers, including parents, teachers, and students, can use to explore the book. The questions will allow readers to reflect on their own experiences during the quarantine, connect to the story, and reflect on assumptions and biases. *Unprecedented* is a 26-page book that is written in prose and is currently in manuscript form. **Figure 1** is an excerpt from the book which includes text from select pages along with the introduction.

Connecting Research to Practice

Unprecedented was developed through research and scientific investigation rooted in authentic data collection. A children's story reflective of research can serve as a potential tool to bridge the gap between scholarship and practice. By incorporating *Unprecedented* into classroom lessons or professional development workshops, children and adults can explore research-based topics that are relevant, accessible, and impactful. Children's literature can offer researchers a vehicle to share their findings while teachers and practitioners can expand their repertoire of competencies and instructional practices. Farley-Ripple et al. (2018) emphasize the need to rethink the way research is linked to practical application across contexts. Korthagen (2003) offers a potential reason for why the research-to-practice gap exists. Teachers require practical knowledge and tools in order to carry out their responsibilities, while researchers thrive in the area of formal knowledge. Transforming formal knowledge from research literature and empirical studies into practical knowledge using applicable tools, such as a children's book, can be powerful. Children's literature and the development of books and stories based on the results of actual educational research may be an overlooked opportunity to bridge the gap between researchers and educational practitioners. It can be utilized as a professional development tool to offer learning opportunities by harnessing unconventional and unexpected methods. Just as it says in the book *Unprecedented*, learning can come in many forms and can happen everywhere and anywhere.

Figure 1

Excerpt from *Unprecedented Manuscript*:

Introduction

The COVID-19 pandemic was a scary time. Many people got sick and many even died from the virus. Books can help us learn and talk about difficult times, they help us connect, and they can help us see things in a new way. This book was written to share how we can always learn something about ourselves, even in dark and unpredictable times. This story is based on real events that happened with real children, teachers, and families in a real school during the pandemic.

Page 1

This story begins in March 2020.
Something serious was happening around the world.
A virus was spreading...

Page 2

Unprecedented they called it,
a time like no other.
People were getting sick everywhere.
On planes,
On buses,
On Trains
At work.
At the library.
At the grocery store.
Even at school.

Page 4

In order to be extra cautious and extra safe,
people were told to stay home.
And so began the great quarantine.

Page 25

The students and teachers in this small New York school
surprised everyone,
even themselves,
Although the grown-ups predicted learning loss,
there was no learning loss at all.

Page 26

This story ends with a beautiful message
that learning can happen anywhere and everywhere.
Even during unprecedented times.

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Interactive Literacy Manual for Pre-Service Teachers' Use in Their Professional Practice

By Madeline Craig, Ed.D., Patricia N. Eckardt, Ed.D.,
Katherine M. Patterson, Ed.D., and Anthony Grant

Abstract

This study explored how the integration of a project-based learning (PBL) activity in an undergraduate teacher preparatory childhood literacy class impacted teacher candidates' knowledge of, and readiness to teach instructional literacy strategies. While engaged in the semester-long activity, four classes of pre-service teachers worked collaboratively to create a digital book and designed activities in the chapters that supported the Science of Reading (SOR). The research design for this project was hypothesis generating with mixed methods. Findings include a better understanding of how using PBL to teach literacy strategies may increase pre-service teachers' content knowledge, their use of reflective practices, and their confidence in the implementation of a balance of technology with multisensory instruction.

Introduction

We, the researchers, have studied project-based learning (PBL) for many years in our teacher preparatory courses. This study continued our exploration of the use of PBL to prepare students to be future teachers while at the same time exposing them to the use of PBL from the student perspective. One of our previous studies found that PBL may facilitate a deep understanding of content knowledge, and that supportive learning communities may be cultivated through productive academic struggle while engaged in PBL experiences (Eckardt et al., 2020). In a more recent study, we found that intentional instruction of social emotional learning (SEL) in a PBL activity showed improvement in the areas of self-management and relationship skills in college students (Eckardt & Craig, 2023). The use of PBL requires constant cultivation, revision, and reflection over time (Craig et al., 2023). Our current study is longitudinal and seeks to understand the use of a PBL activity specifically related to elementary literacy strategies. Pre-service teachers will be followed for seven semesters after they take an undergraduate elementary literacy course. Findings from the first year of the study are presented as they relate to the creation of a digital literacy manual to aid pre-service teachers in understanding elementary literacy concepts and how they might be taught in their future classrooms.

Literature Review

PBL had become a practical pedagogical approach in teacher education, aimed at enhancing various competencies in pre-service teachers. Puspitasari (2020) emphasized the implementation of PBL in cultivating 21st century skills among pre-service English teachers. The study illustrated how PBL encouraged collaborative writing and activity designing within literacy-focused chapters directly relevant to elementary classroom settings. The hands-on experience in designing literacy content, as highlighted in Puspitasari's study, provided teacher candidates with practical skills and innovative teaching strategies vital for effective literacy instruction.

Similarly, Saputro et al. (2020) explored the enhancement of self-efficacy and critical thinking in pre-service elementary teachers through Problem-Based Learning, a variant of PBL. Focusing on critical thinking was crucial for literacy education, as it involved understanding complex texts and developing nuanced instructional strategies. The findings suggested that engaging in problem-solving tasks within the literacy domain bolstered teachers' confidence and decision-making abilities in literacy instruction. In the context of teacher perceptions, Mahasneh and Alwan (2018) investigated the influence of PBL on student-teacher self-efficacy and achievement. Their findings indicated that PBL could significantly heighten self-efficacy, which prepared teachers to handle classroom challenges, including teaching literacy. This study supported the notion that practical, project-oriented experiences positively affected teacher candidates' self-perception of their readiness to teach literacy immediately after the course and in their future classrooms.

Taskiran (2021) provided insight into project-based online learning experiences for pre-service teachers. In the then-current digital era, where online teaching was increasingly relevant, this study's implications for PBL in virtual settings were significant. The adaptability of PBL to online platforms suggested that pre-service teachers could develop literacy teaching strategies that were not confined to traditional classroom settings, thereby broadening their instructional capabilities and readiness.

Domenici's (2022) exploration of STEAM PBL activities at a science museum for future chemistry teachers, although not directly focused on literacy, offered an interdisciplinary perspective. It highlighted how PBL could transcend subject boundaries and suggested that literacy educators might benefit from interdisciplinary PBL approaches. This perspective was crucial in understanding literacy not in isolation but as an integral part of a broad educational experience. Integrating PBL in teacher preparatory programs, especially in childhood literacy classes, showed promising results in enhancing pre-service teachers' capabilities in instructional literacy strategies and their readiness to teach literacy. The literature suggested that through PBL, teacher candidates gained hands-on experience, critical thinking skills, and increased self-efficacy, which were fundamental to teaching literacy effectively. Moreover, as shown in various studies, the interdisciplinary and adaptable nature of PBL underscored its potential in preparing teacher candidates for diverse educational contexts.

Methodology

This study explores the impact that using a semester-long PBL activity in a childhood literacy class might have on pre-service teachers' teaching efficacy when providing literacy instruction. This longitudinal study is hypothesis generating using mixed methods. The key questions asked in this research study include: 1) How can the integration of a semester-long PBL activity in a childhood literacy class help pre-service teachers understand and create instructional literacy strategies? 2) How can the integration of a semester-long PBL activity impact pre-service teachers' perceptions of their readiness to teach subtopics of literacy immediately after the class, after student teaching, and in their initial classroom after graduation?

Data Collection and Analysis

Participants included 58 pre-service teachers (fall $n=37$, spring $n=21$), one professor who taught the course, and two professors who helped design the study and contributed to interrater reliability. Data were collected throughout the 2023/2024 school year and included 1) an Interactive Literacy Manual and Rubric, 2) an Assessment of Content Knowledge, (3) a Readiness to Teach Survey, and lastly 4) Reflective Papers. A compilation of qualitative and quantitative data from both semesters were then reviewed and coded based upon emerging themes. Researchers triangulated data and consulted Braun and Clarke's (2006) 6-phase thematic analysis.

Results

Interactive Literacy Manual and Rubric

Collaborative groups of two, three, or four pre-service teachers worked throughout the semester to create a digital book using the educational technology tool,

Book Creator. Pre-service teachers completed specific pages related to literacy competencies addressing phonemic awareness, phonics, comprehension, writing, and vocabulary. These manuals provide a helpful resource for students to potentially use in their future classrooms.

Contents include an introduction to each literacy competency, active learning strategies for each competency, assistive technology ideas, SEL and mindfulness strategies, and lastly, resources for families. In addition, pre-service teachers shared individual journal critiques in the manual to further link theory to practical application for literacy instruction. For example, one group planned an activity to create a rap song using tiered vocabulary, and several groups created multisensory games to teach phonemic awareness and phonics skills. Ideas related to mindfulness and supporting students' social and emotional needs included positive thoughts and affirmations, daily journaling, mindful walks and talks, and daily check-ins, just to name a few ideas from the manuals. Strategies for families included a multitude of infographics and helpful hints that could be used to assist their child with literacy. The Interactive Literacy Manuals presented a balance between technology and hands-on, multisensory, tactile activities intended to engage learners. The researchers reviewed the instructor's assessment of the manual which included a single-point rubric. All pre-service teachers received one-point, achieving mastery on the assignment.

Assessment of Content Knowledge for Childhood Literacy Methods Class

Administered at the end of the semester, the Assessment of Content Knowledge (ACK) examines four elements: 1) reading comprehension, 2) foundational skills, 3) grammar usage, 4) and writing mechanics. The assessment was created prior to this study; these elements were developed separate from the topics in the Interactive Literacy Manual. Topics in the interactive manual included 1) decoding (specifically pertaining to phonemic awareness and phonics), 2) reading comprehension, 3) writing (structured and unstructured writing activities), 4) and tiered vocabulary instruction.

While the ACK was developed separately from the Interactive Literacy Manual, when reviewing data, researchers noticed a parallel between the project which was being used for classroom instruction and the content knowledge benchmark. The researchers averaged the scores attained for each element on the ACK; a score of 2.5 is considered proficient. The average scores generated at the end of the semester showed a score of 2.498 for reading comprehension, foundational skills presented with an average of 2.644 points, grammar usage attained a score of 2.592, and writing mechanics revealed an average score of 2.514 points. There appeared to be a positive relationship between the chapter focus and scores pertaining to content knowledge. Pre-service teachers

worked on their chapters throughout the semester, class time was permitted for group work, instructor support was offered in-class and on-line when needed. While it cannot be statistically proven from this one data set that the project strengthened content knowledge, the average scores of proficiencies in each area might have been attained or strengthened by group project work coinciding with conceptual knowledge simultaneously taught in class.

Reflective Papers

Pre-service teachers wrote individual short reflective papers about their experiences working on the PBL activity. The project was generally well-received as pre-service teachers found the project to be more beneficial and engaging than a traditional final exam as it allowed for creativity, collaboration, and the application of knowledge in a practical format. Findings from the reflective papers were categorized into four key themes: collaboration and communication, creativity and flexibility, practical application, and technology integration.

Pre-service teachers expressed that effective collaboration and communication were central to the project's success. They valued working together, sharing ideas, and supporting each other. One pre-service teacher noted, "Working together to better the experiences of our future students' lives and the efficiency of our future workday is extremely beneficial." Creativity and flexibility were the second theme, as the pre-service teachers shared how the project allowed for significant creative freedom and flexibility, which was both engaging and empowering. The wide variety of multi-sensory activities that were incorporated into the manual was a key strength of the project. One pre-service teacher wrote, "My peers and I came up with over forty different activities pertaining to phonemic awareness, phonics, and syllable types, comprehension, writing, and vocabulary. These activities will ALL be useful in a classroom setting." The third theme was related to the practical application of the project, and one pre-service teacher commented, "This manual has provided me numerous tools that I am happy to be able to refer to in the future." Confidence seemed to increase throughout the semester in terms of feeling more comfortable both understanding and teaching the content. One pre-service teacher wrote, "The literacy manual was a great alternative to a test because it is something we can look back on and revisit while still gauging our knowledge on the topics at hand through our development of the activities." Technology integration was a fourth key theme as these future teachers shared some challenges with using *Book Creator* but also found it beneficial to learn new technology that could be incorporated into their teaching. "We continued to grow our abilities with technology by introducing a new medium for creating content (*Book Creator*)." These pre-service teachers also shared an awareness of the importance of balancing tech-

nology with students' well-being by including activities focused on mindfulness. "I believe SEL is a huge part of teaching, and I will implement that into my classroom." Pre-service teachers grasped the importance of balancing literacy instruction with their students' social emotional needs all while using technology intentionally.

Readiness to Teach Literacy Survey Results

This 9-item survey, created by the researchers, included one demographic question to identify the participant's status in their teacher journey, seven 5-point Likert questions assessing participants' self-efficacy of literacy content knowledge and readiness to teach topics related to the SOR as well as the integration of interactive and assistive technologies, and two open-ended questions that explored (1) participants' reasoning for their Likert scale responses and (2) their reflective practices.

When asked about self-efficacy related to preparedness to implement methods addressing the five literacy elements after creating the manual, 78.5% of pre-service teachers indicated that they felt extremely or very prepared to teach phonemic awareness. Similarly, 80.3% of pre-service teachers indicated they felt extremely or very prepared to teach phonics. For comprehension, 91% indicated they were extremely or very prepared to implement comprehension methods, and 85.6% felt extremely or very prepared to implement writing methods. Moreover, 89.2% of pre-service teachers identified primarily as extremely or very prepared to implement vocabulary methods. Perceptions of preparedness to implement interactive and assistive technology were evident with more pre-service teachers (92.8%) indicating they feel extremely or very prepared to implement interactive technology than assistive technology (87.4%).

The narrative portion of the Readiness to Teach survey yielded five themes. Pre-service teachers consistently emphasized that creating the literacy manual enhanced deeper content knowledge, development of teaching preparedness, confidence with technology integration, the value of increasing teacher concept knowledge to teach effectively, and enjoyment of collaborative learning. Pre-service teachers shared "By having a deeper understanding of a topic myself, it will allow me to better explain this to my students!" and "Personally, using interactive technology in the classroom is crucial to students understanding the material on a deeper level. It also helps students who struggle with learning and comprehension to be able to use technology as a guide". Furthermore, pre-service teachers identified reflective practice addressing four areas: feedback from professors, peers and in-service teachers, conversations, and self-reflection. Pre-service teachers consistently reported their belief that reflective practices will help them adjust pedagogy, enhance teaching knowledge, pin-point areas of struggle, and differentiate learning.

Hypotheses Generated

Two themes were recognized when analyzing data. Themes included 1) the importance of reflective practice and collaboration with peers to develop instructional activities intended to engage students in literacy instruction and 2) the value of technology integration to reinforce and enhance instruction. This PBL activity supported literacy content knowledge through the creation of multi-sensory, engaging activities which balanced technology and social emotional strategies for practical application. Based upon the data analysis and the hallmarks of PBL, two hypotheses were generated from experiences in authentic classroom settings. **Hypothesis 1:** A semester-long, small group collaborative activity, based upon principles of PBL, may increase literacy content knowledge and lead to better understanding of the importance of reflective practices as both an educator and learner. **Hypothesis 2:** Using a technology-based PBL activity in a pre-service teacher's literacy method's class may increase confidence and teacher efficacy in their readiness to teach literacy and an understanding of balancing the use of technology with tactile and multisensory instruction.

Limitations and Discussion

Though it may be deemed as a delimitation, since the nature of the undergraduate course is to teach students about the SOR and effective strategies, pre-testing students' limited prior knowledge was deemed potentially unhelpful for assessing baseline SOR understanding. While (with an n=58) these findings may not be generalizable to the whole population, hypotheses generated may contribute to pedagogical approaches used in teacher preparatory classes.

Integrating pedagogical practice with an understanding of the SOR is only part of effective literacy teaching practices (Davis & Bernadowski, 2023). Educators must be reflective in their analysis of the factors influencing student learning outcomes when planning and teaching responsively (Rodgers, 2020). Furthermore, engaging in meaningful peer conversations during a semester-long PBL activity exposes pre-service teachers to authentic discussions on teaching and learning the five elements of literacy. Building teacher efficacy in teaching literacy and intentionally using technology can translate to increased and improved student learning. A recent meta-analysis of 53 studies of literacy instruction for K-5 students found that elementary students are likely to benefit from the use of technology delivered literacy instruction (Dahl-Leonard et al., 2024). The latest revision of the National Educational Technology (NET) Plan calls for the closing of the digital use divide "ensuring all students have transformative, active, creative, critically thoughtful experiences supported by technology" (U.S. Department of Education, 2024, p.10). By building pre-service teachers' skills

in using a balanced approach to technology integration, we better prepare our future teachers for an increasingly digitized future. The 2024 NET plan advocates for the use of Universal Design for Learning (UDL) as a framework for optimal technology integration. UDL focuses on choice and flexibility for learners giving the learners themselves the option to use technology or non-technological options to meet the learning objectives. This balance leads to better outcomes.

The initial findings of this longitudinal study shed light on the use of PBL to teach literacy concepts by creating a collaborative Interactive Literacy Manual that pre-service teachers can potentially utilize digitally when they become teachers. As reflective practitioners, we see the value in always examining our own practices in our classrooms and in our research to produce better outcomes for our students and, in turn, their future students.

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Book Review:

Educational Pluralism and Democracy: How to Handle Indoctrination, Promote Exposure, and Rebuild America's Schools

By Ashley Rogers Berner

**Reviewed by Anthony J. Annunziato, Ed.D., Clinical Associate Professor,
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In his seminal work, *Popular Education and its Discontents*, Lawrence Cremin, the eminent historian and education scholar from Teachers College, Columbia University, wrote, "Education cannot take the place of politics, though it is inescapably involved in politics, and education is rarely a sufficient instrument for achieving political goals, though it is almost always a necessary condition for achieving political goals." (Cremin, 1989, p. 118) This statement holds today as it has at any time in American History. It is in today's polarized climate, where our schools have become battlegrounds for competing ideologies, that the urgency of Ashley Rogers Berner's "Educational Pluralism and Democracy" cannot be underestimated. Her timely, thought-provoking examination of how education might navigate the current political storm and perhaps build a more inclusive and effective educational system is a call to action. Ashley Rogers Berner is Director of the Johns Hopkins Institute for Education Policy and Associate Professor of Education.

Berner correctly argues what many educational researchers and practitioners have come to believe: the current one-size-fits-all approach to education has failed to serve the diverse needs of our students and communities. She proposes a shift towards educational pluralism, a model allowing various educational options, each rooted in distinct values and pedagogies. This approach, she contends, is not only more democratic but also more likely to cultivate the kind of critical thinking and intellectual engagement that are essential for a thriving society and generally missing from our educational system.

The book is both a diagnosis and a prescription. Berner meticulously documents how our schools have

become susceptible to indoctrination, often promoting narrow and partisan views. She offers concrete strategies for addressing this problem, including promoting greater exposure to diverse perspectives and fostering a culture of open inquiry that is synonymous but on a much larger scale than such reforms as culturally relevant pedagogy. The comprehensive nature of her approach reassures the reader of the thoroughness of her research and the validity of her conclusions.

But Berner's vision goes beyond simply addressing our schools' immediate challenges. She offers a compelling case for why educational pluralism is essential for the long-term health of our democracy. In a world where information is abundant and easily manipulated, navigating competing claims and arriving at informed judgments is more crucial than ever. Educational pluralism, she argues, is the best way to equip our students with these vital skills.

Educational Pluralism and Democracy is a challenging and thought-provoking book. It doesn't offer easy answers or simplistic solutions. However, in the tradition of Lawrence Cremin Berner's book forces us to confront the hard questions about the purpose of education and its role in a democratic society or, more specifically, the American democratic society. The book provides a rich historical and philosophical backdrop. In Chapter One, *Uniformity Versus Pluralism*, the author discusses the structure of education that developed in the United States as opposed to European nations, grounding the discussion in a broader context and offering insights into how we arrived at the current polarized educational landscape and why the U.S. is ripe for a move toward pluralism and away from uniformity. Berner presents a compelling and timely argument for reimagining American education

through the lens of pluralism. This lens is particularly relevant today, often dominated by debates over standardized testing and curriculum control. Berner's central thesis of educational pluralism embraces a diversity of educational providers and approaches essential for a healthy democracy. Berner argues that a pluralistic system fosters innovation, empowers parents, and cultivates a sense of civic engagement.

Each chapter in the book builds upon the previous one to build an argument as to why education in the United States, as she states, is ripe for "a pluralistic model has the capacity to carry us through the current cultural and political morass into a fairer, stronger and more generous space." (Berner, 2024, p. 7) The book's strength lies in its ability to bridge theory and practice. Berner skillfully navigates complex issues such as indoctrination, exposure, and the state's role in education. She advocates for a balanced approach that safeguards against ideological coercion while promoting intellectual curiosity and critical thinking. Chapters Two and Three focus on the content of education in America, continuing her argument about how the United States developed a very different system than that of Europe. Chapter Four, Putting it All Together, presents a central argument that diverse schools and rich content belong together in a strong, effective school system. Chapter Five, Limitations and Open Questions, is probably the most thought-provoking and likely to be the most controversial of the book. It is an attempt to present the challenges a move to a pluralistic educational system will face, namely, ensuring the "guardrails" against racial discrimination, countering the existence of the supposed seditious conspiracy, discrimination against LGBTQ, and what new effective models based in educational pluralism can be established considering these challenges. Chapter Six, Toward the New Conversation, is the cumulative chapter that presents a road map for the discussion on moving toward a more pluralistic educational system.

Berner's call for rebuilding America's schools is both ambitious and pragmatic. She offers concrete recommendations for policymakers, educators, and parents, emphasizing the need for collaboration and a willingness to embrace change. Her vision for a more pluralistic and democratic education system is inspiring and challenges us to rethink the very foundations of schooling.

That being said, Berner's book, despite the strong arguments presented, has one elephant in the

room: the transition to a pluralistic system would undoubtedly face many political challenges and would likely require another book that would delve deeper into potential obstacles and strategies for overcoming them. As John Dewey wrote, "mankind likes to think in terms of extremes opposites. It is given to formulating its beliefs in terms of Either-Ors, between which it recognizes no intermediate possibilities." (Dewey, 1938, p. 17) An apt description of the current political climate whereby implementing Berner's proposals could face significant opposition.

The reader cannot help but be inspired by Educational Pluralism with its brilliantly argued premise, excellent historical presentation, and hope for a better educational system in the United States, something elusive in its short history. As Dewey went on to write, "When forced to recognize that the extremes cannot be acted upon, it is still inclined to hold that they are right in theory but that when it comes to practical matters, circumstances compel us to compromise." (Dewey, 1938, p. 17) If Dewey's words can somehow be reinstalled for politics in America today, then there is hope for a more pluralistic and effective structure to develop in America's schools.

Whether you agree with Berner's conclusions or not, this book is essential reading for anyone concerned about the future of education in America. "Educational Pluralism and Democracy" is a thought-provoking and insightful work that deserves the attention of anyone concerned about the future of education in America. Ashley Rogers Berner's clear prose, rigorous analysis, and unwavering commitment to the ideals of pluralism and democracy make this book a valuable contribution to the ongoing conversation about how to best prepare our young people for the challenges and opportunities of the 21st century.

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