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ABOUT *JCLL*

The *Journal of College Literacy and Learning* (*JCLL*) (ISSN 0738-9523) welcomes material related to advancing scholarship on reading, writing, and academic success at the postsecondary level. *JCLL* is published by the College Literacy and Learning Special Interest Group of the International Literacy Association and is intended to provide a forum for the exchange of information regarding research, theory, and practice.

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ABOUT THE CLL SIG

The College Literacy and Learning SIG represents a constituency of ILA focused on issues related to postsecondaryliteracy and learning. The SIG officers are:

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From the Editors

Creativity Over Crisis: Transformations in College Literacy and Learning

Heather Johnson-Taylor

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"The secret of change is to focus all of your energy, not on fighting the old, but on building the new." -Socrates

We introduce this volume in the context of numerous transformations taking place in post-secondary education. As educators and scholars, we understood that the abrupt transition to online learning during the COVID-19 pandemic would forever shape our classrooms, our students, and ourselves. The past few years have offered clarity about the nature of those changes and possibilities for navigating them. Indeed, in our last few volumes, we have explored the critical importance of understanding our students' needs and helping them to construct identities and engage in agentic action as part of that transformation. This work continues. Our students' needs are changing. To illustrate this, after returning to in-person instruction on college campuses, students have continued to experience impaired mental health and diminished self-efficacy (Liverpool et. al., 2023). To cite another example, due to improvements in diagnosis, awareness, and accessibility, more neurodivergent students are attending college (Dwyer et. al, 2023). Dynamic, flexible, transformative, and responsive pedagogies are needed to better support our students' unique needs.

As a field, we are rethinking assumptions, centering the holistic needs of our students, open to innovation, and responding to crisis language with a renewed interest in pedagogy and transformation (Jamieson, 2021). Each of the articles in this volume invite us to do just that.

In **"Exploring Student-Perceived Learning Gains from a Social Justice Collaborative Writing Project"** the author presents research that examines the content

knowledge gained by students who participated in a collaborative, social justice writing project. This manuscript sheds light on the potential of collaborative writing for fostering content knowledge and nurturing students' writing abilities.

Our next manuscript, "**Self-Regulated Learning in Developmental Literacy Courses: Examining the Alignment of Learning Outcomes, Students' Goals, and their Metacognitive Literacy Practices,"** shares groundbreaking research that analyzes alignment of students' literacy goals and strategy use with student learning outcomes in a developmental literacy context with a raciolinguistic justice-oriented curriculum. It offers insight into the relationship between students' literacy goals, instructional strategies, and achieved learning outcomes to inform applications of self-regulated instruction in postsecondary literacy contexts and beyond.

In "**Transformed Literacy Experiences: Cultivating a Relationship with Reading**" one postsecondary literacy instructor traces her efforts to provide students with purposeful, meaningful, and transformative literacy experiences in a unit centered around Barbara Kingsolver's novel *Demon Copperhead*. It offers suggestions for helping students to become more active, strategic, and self-motivated readers.

In **"Scaffolding: Transforming Classroom Instruction to Support Student Growth"** the authors focus on the importance of transforming classroom instruction through scaffolding, social support, and structure in order to address shifts in communication and socioemotional needs. The authors argue for a responsive and holistic pedagogy that will help students to engage and thrive.

In "**SPD in the College Reading and Writing Classroom**" the author shares a vital perspective on the increasing numbers of neurodiverse individuals in postsecondary classrooms, particularly as it relates to Sensory Processing Disorder. The author advocates for transforming classroom spaces to accommodate the "act of physical courage" that writing can be for students with SPD so students can accomplish literacy tasks more efficiently.

Finally, "**Transformation of Instruction to Enhance Student Success"** describes the evolution and transformation of a college's C4 (Cross Curricular Career Community) Scholar Program across multiple cohorts. It offers insight into how to remain relevant and responsive to students' needs and the impact those changes have on program and student success, especially as it relates to agency and perseverance.

We hope the manuscripts presented in Volume 49 will be useful to you as you consider this theme of transformations. It is our intention to provide scholarship on current trends to better support you as scholars and practitioners in the field of college literacy and learning. We appreciate the authors and thank them for sharing their important work, and for the many dedicated reviewers who give of their time, energy, talents, and expertise to *JCLL*. Finally, we would like to thank you, dear readers, for your interest and dedication to college literacy and learning and your support of this publication.

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Exploring Student-Perceived Learning Gains from a Social Justice Collaborative Writing Project

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ABSTRACT

In this qualitative study, the researcher was interested in understanding the kind of content knowledge students attained after participating in a social justice writing project. The study, underpinned by the theory of social constructivism, involved thirty students who worked on a group research paper. Data was collected through an online survey that asked students to reflect on their writing experience. The results indicated that collaborative writing facilitated peer learning, which was partly attributed to the active dialogues and group discussions centered around students' research findings. Students reported acquiring content knowledge about the historical backdrop of their social justice issue, the key individuals involved, and prevalent terms commonly linked to the issue, among other aspects. In terms of writing-related knowledge, students indicated that they learned various skills, including synthesizing sources, creating an annotated bibliography, and citing in MLA/APA formats, among other things. The study suggests that writing instructors should design projects that foster collaboration because this collaborative approach not only enhances students' understanding of course content but also contributes to developing their writing skills.

Keywords: collaboration, collaborative writing, peer-to-peer learning, social justice

Introduction

Writing is a social act that can be externalized through public conversation (Henschen & Sidlow, 1990). When students embark on a writing task, individually or as a group, the composition process generally encompasses the assistance of others who contribute to creating and completing the final product. Taking that understanding further, the process of collaborative writing, in essence, involves the combined efforts of two or more team members to produce a single text (Allen et al., 1987; Ede & Lunsford, 1985). Writing is rarely an individual endeavor (Aydin & Yildiz, 2014, as cited in Vygotsky, 1978). It is likely that students will participate in group writing activities during their college years, and this collaborative approach to writing will likely persist beyond their academic life. Therefore, colleges should not only prepare students for their prospective careers but also provide

them with the skills for effective participation in group writing tasks. This preparation is crucial as it mirrors the collaborative work environment they will encounter in their future careers. We should, then, equip students with the skills to confidently engage in collaborative writing, foresee potential collaboration hurdles, adeptly manage internal disagreements, and master effective strategies for accomplishing collaborative tasks. In school, when students work on essays on their own, each student would receive an individual grade. However, in a professional environment, projects are often undertaken by teams to achieve a broader, shared objective (Bush & Zuidema, 2013).

Given the paramount importance of mastering collaborative writing in professional settings, it is essential to persistently delve deeper into this field of study (Supiani, 2017; Wang et al., 2017). The research objectives aim to investigate the specific content knowledge that students can acquire through participation in a collaborative writing project, as well as the sources of this knowledge. These objectives are important because they can provide writing instructors and instructors across the university with new insights and methods for creating practical group assignments. Furthermore, it can amplify the advantages for students and enrich our comprehension of how collaboration can bolster students' writing abilities and grasp of the course content.

Literature Review

Benefits of Collaborative Writing

There is extensive literature on the advantages of collaboration in an educational environment, mainly dealing with English as a Foreign Language/English as a Second Language (EFL/ESL) students (Ahmad, 2020; Feuer, 2011; Kessler et al., 2012; McDonough et al., 2018). In the context of group assignments, studies within the EFL/ESL field have underscored the specific support that students with less linguistic proficiency often seek from their more skilled peers. This assistance pertains to the language skills they need reinforcement in and the type of language competencies they can cultivate through peer learning (Blin & Appel, 2011; Dobao, 2014; Du, 2018). Feuer (2011), for example, studied the impact of a collaborative writing project on second-language students' proficiency development. The study involved six third-year Hebrew students from the University of Maryland, who were tasked with creating a fictional town for their stories (pp. 128–129). The findings revealed that students made substantial progress toward gaining a higher level of proficiency due to continued exposure to hearing new vocabulary and grammar being repeated in conversation and seeing it appear in others' writing pieces. As a result of the exposure, students started applying their newly acquired knowledge in their assignments and verbal communication. The continuous interaction with peers who possess proficiency in a language is an advantage derived from collaborative discussions and peer-editing sessions (p. 136).

Aside from language skills, developing writing skills is another significant learning benefit of collaboration. In 2013, a study by Luna and Ortiz aimed to discover the implications of collaborative writing on academic writing at the tertiary level (p. 133). After examining the written papers and video recordings, the researchers concluded that EFL students "were more aware of the importance of capitalization, the use of connectors, transition words, and punctuation than before the intervention" (pp. 134–138). The benefits that can be acquired or realized through writing collaboratively extend beyond the classroom and into the workplace, something that Ede and Lunsford (1985) noted in their study: "Arriving at a consensus; looking at an issue from several differing viewpoints; learning to listen carefully and to respect the views of others; inferring sound conclusions from particular instances" (pp. 124–125).

On top of second-language students

learning how to speak and write in the English language, working with their peers can also provide a forum for students to understand common writing concepts. Blin and Appel's (2011) study confirmed that collaborative teamwork, along with Web 2.0 applications (such as computer-mediated technologies), has helped second-language students understand more about the writing process, audience awareness, and the need to focus on form (pp. 473–475). Collaboration, then, sets the stage for enhancing individual cognitive growth. If students are deficient in a particular skill, group interactions provide an opportunity for them to acquire or develop it. Trentin (2009), for example, learned that co-writing offers opportunities to develop reading, writing, reflection, and critical thinking skills.

Collaborative writing is gaining prominence in academic circles (Supiani, 2017) and in professional settings (Wang et al., 2017). As a result, more and more domestic students are participating in collaborative writing exercises. These activities help them develop critical skills, such as the ability to synthesize arguments (Granado-Peinado et al., 2023) and to write expository texts (Li & Mak, 2022).

Equitable Division of Labor Issue

At the same time that collaborative writing promotes learning benefits (Li & Zhu, 2017; Trentin, 2009), a drawback to writing collaboratively is the equitable division of labor issue. Some teachers and students believe group members do not always share work equally (Blin & Appel, 2011). As such, students typically express anxiety about collaborative projects because of the uneven workload distribution (Allagui, 2023). Given this phenomenon, teachers must wrestle with an equitable way of providing a fair grade for students in group projects (Daemmrich, 2010). Despite students' efforts to employ a divide-and-conquer strategy for efficiency, collaboration can arguably be viewed as a holistic process, which cannot be subdivided into parts: "[S]uccessful collaboration cannot be reduced to the visible participation of students in the collective activity, nor to the apparent division of labor. As the activity unfolds, the mediational and collaborative structures of the activity are likely to transform themselves in unexpected ways" (Blin & Appel, 2011, p. 478). This unexpected way could mean a shift from working collectively to working individually, necessitating dividing a group writing project into separate parts to accommodate various factors impacting the students involved (e.g., specific assignment parameters, language needs, team goals, competing commitments). This fluid process highlights the dynamic and complex nature of collaborative writing.

Furthermore, in the context of a collaborative project, it is not uncommon or unexpected for the contributions of individual students to vary, with some contributing more than others. This disparity in contribution levels is a natural aspect of group dynamics (Kessler et al., 2012). A typical way to divide the workload is to assign or have students volunteer for specific project parts, reflecting the copy-and-paste strategy. Students essentially focus on their respective tasks before subsequently merging their contributions into the primary document. This approach is referenced by Allen et al. (1987) and observed in a multimodal collaborative project by Allagui (2023). However, when teams choose to divide tasks and work on them separately, this approach can lead to the final piece of writing appearing fragmented and lacking in coherence: "the final group essay lacks structure and cohesion; individual essays follow each other, and are introduced by a single sentence; both the introduction and the conclusion are short and remain rather general" (Blin & Appel, 2011, p. 490). Despite the efficiency of task division, the risk of producing a disjointed and incoherent final output remains a significant concern.

Reluctance Toward Collaboration and Collaborative Assignments

Beyond the challenges of ensuring an equitable division of labor, additional factors contribute to the resistance toward collaborative writing. Chisholm (1990) identified four problems associated with collaborative writing. In collaborative writing, some students resist participating in group work because of scheduling conflicts, different priorities, or lack of interest (pp. 92–96). Some students also lack experience working productively in a collaborative setting and are not trained to provide constructive feedback on team members' contributions (pp. 96–101). Another problem that is typical of working collaboratively is the interpersonal conflicts or friction that arise from the different personalities and opinions of the members (pp. 102–104), a problem also identified by Bush and Zuidema (2013) and Daemmirch (2010). Lastly, an additional challenge arises when there is an uneven distribution of effort in a group project, with some students participating more than others (which has also been observed by Kessler et al.). This imbalance raises questions about the equity of grading (pp. 104–106), a problem also identified by Daemmrich (2010).

In addition to the challenges highlighted by Chisholm, collaborative writing presents other complexities. Among these is the question of authorship (e.g., the decision on who should be listed as an author can be influenced by the extent of their contributions), a topic also discussed by Dobao (2014) and Lunsford and Ede (1986). It is essential to understand that writing is fundamentally a collaborative and social endeavor. Therefore, students need to appreciate that writing, especially beyond the academic sphere, necessitates active engagement in communication with others (Wardle & Downs, 2023, p. 17). However, it is worth noting that some individuals perceive writing as a solitary endeavor, as expressed by one interviewee from Wang et al.'s (2017) study: "You're watching other people writing and you know yourself to be watched by the other people. … Writing should be a private activity" (p. 11). In some industries, it is critical to know who is responsible for what part of a shared document because there could be consequences for using incorrect statements of fact or law, such as those typically seen in the legal field, making some professionals wary of writing with others (Wang et al., 2017, pp. 10–11). Other times, students believe that working together on a writing project is stressful because there can be a lack of communication or effort from the team (Allagui, 2023).

Building Success Together Via Collaboration

While some students and teachers may express reservations, the potential for greater content comprehension significantly outweighs the critiques associated with collaborative writing. The distinct advantage lies in merging various students' unique writing knowledge, skills, and abilities. This process, known as 'collective scaffolding' (Villarreal & Gil-Sarratea, 2019), facilitates the attainment of a common goal. Deveci (2018) found that the "variety in skills such as reading, organization, and computer allowed students to produce better quality work and learn from each other" (p. 727). Blin and Appel (2011) found that when students merged their parts into the main Google document, "language errors and oddities became shared problems, which students tried to solve collectively" (p. 494). This finding is echoed in Deveci's (2018) study, which learned that editing (i.e., peer feedback) was the most frequently cited benefit, with students who believed that "team members fill each other's gaps in writing" (p. 727).

Other commonly cited benefits of working together include the generation of ideas (e.g., it fostered creativity among students) and time management (e.g., workload division enabled students to accomplish more work in less time) (Deveci, 2018, p. 727). These kinds of benefits extend to multimodal collaborative writing projects as well. In such settings, students have reported that their positive attitudes toward these projects were significantly influenced by the gains in research and information literacy skills they developed (Allegri, 2023). Thus, the

benefits of collaborative learning are multifaceted, encompassing not only language proficiency but also creativity, time management, and information literacy, to name a few.

Final Remarks

Even though collaborative writing comes with its own set of challenges, it provides substantial rewards. It brings together a multitude of perspectives, improves understanding of tasks, and minimizes writing errors. Importantly, the quality of papers produced through collaboration often exceeds that of papers written individually (Pham, 2023; Villarreal & Gil-Sarratea, 2019). Texts written collaboratively tend to be more accurate than those written by a single author, a phenomenon attributed partly to the dialogue among writers (Neumann & McDonough, 2015). McDonough et al. (2018) noted that collaboratively written texts had fewer errors and displayed superior content, organization, and language use, including improved coordination and subordination. This enhancement in text quality is especially noticeable in collaborative projects involving second-language students (Ahmad, 2020). These enhancements were most noticeable in groups actively engaged in task discussions, effectively pooling their collective knowledge and skills. In a collaborative environment, then, students take on dual roles as both educators and learners, creating a space where knowledge is shared and received in equal measure. This vibrant exchange, where learning is heightened through teaching one another, is not merely profitable but a fundamental necessity in education.

Research Questions

The field of collaborative writing has been extensively studied, particularly in the context of English as a Foreign Language (EFL) and English as a Second Language (ESL) students. However, when examining the benefits of collaborative writing for native speakers of English, the literature is relatively sparse (Allen et al., 1987; Daemmrich, 2010; Forman, 1991; Li & Mak, 2022). The existing literature reveals a gap that points out the need for further research in the area of collaborative writing. It is widely accepted that such collaboration can bolster creativity, improve problem-solving abilities, and foster a comprehensive understanding of the writing process. This learning dynamic is not exclusive to EFL/ESL students. In fact, the collaborative approach can offer substantial benefits to native English speakers as well. By participating in peer learning and collaborative writing, these individuals can deepen their understanding of the course content.

This project aims to delve deeper into this aspect of knowledge acquisition, particularly emphasizing the potential benefits that native English speakers can reap from this collaborative learning framework. It is worthwhile to investigate the gains that native English speakers can receive from collaborative writing, whether in academic, professional, or creative settings. Such research could yield valuable insights into the pedagogical strategies that can be implemented to improve the writing skills of all students, irrespective of their language proficiency. This approach emphasizes the universal applicability and potential of collaborative writing, extending its benefits to a broader student population.

In this IRB-approved study, I sought to expand the literature on the topic of collaborative writing by examining the sources of students' knowledge and the content knowledge itself. Collaborative writing studies have demonstrated learning benefits from this endeavor, including language skills development (Dobao, 2014; Feur, 2011) and writing skills development (Blin & Appel, 2011; Deveci, 2018). Researchers have also looked at the effects of collaborative writing on a student's ability to write quality text after a joint activity (Ahmad, 2020; Chen, 2019). However, it is not yet clear what content knowledge (aside from language skills and writing skills) native speakers of English

students specifically acquire via peer learning and collaborative writing from a group writing project on a social justice issue.

Thus, an area that needs to be better researched is the specific kinds of content knowledge that this population of students can gain from a group writing product. Trentin (2009) believed there were at least three areas that individuals could be evaluated on based on co-writing a document: the product of co-writing, the process used for co-writing, and the learning of the subject content (p. 53). My research questions aimed to address the last aspect of Trentin's (2009) evaluation criteria: What kind of content knowledge did students attain after participating in a social justice writing project, and what were the sources of students' content knowledge from the group writing project?

Theoretical Framework

This research study relies on the social constructivism framework, which is a common framework seen in collaborative writing studies (Allagui, 2023; Kasemvilas & Olfman, 2009). Social constructivism is rooted in the idea that human knowledge is interactional, which means that knowledge is created through participation in discursive activities (Doubleday et al., 2015; Kasemvilas & Olfman, 2009; Mishra, 2015). Because writing is seen as a social act, it is by nature dialogical (Anderson & Holt, 1990). In fact, Anderson and Holt (1990) developed a junior-level sociology writing course based on a social constructivist theory derived from the works of Kenneth Bruffee's A Short Course in Writing (1985) and Charles Bazerman's The Informed Writer (1989) as a way to illustrate the conversational nature of the writing process (pp. 180–181). Instead of focusing on writing as an independent endeavor, Anderson and Holt devised tasks to demonstrate the nature of writing as a communal activity. The course included small-group work, class discussions, and individual conferences with the instructor. Students also interacted with the text by writing marginal notes to their readings and presenting their research findings from their final project to the class (pp. 181–183). The course assignments Anderson and Holt created are typically seen in writing courses today, supporting the appropriateness of using the social constructivist framework to examine collaborative writing.

Methodology

Context

In the spring of 2022, I taught four sections of College Composition II at a private university in the Southeastern region. The class had one theme for the sections: social justice today. The course was designed to teach students about several writing concepts, including applying a lens to a text and tracing a conversation. The project required students to compose a research paper centered around a social justice issue. The aim was to help students identify the variables that can steer the trajectory of a social issue, mirroring the way discussions about political and social events take shape in modern times. When we create assignments for students, we need to make sure there is value behind their learning: our job as writing instructors is to provide students with "meaningful contexts and authentic purposes for writing" (Aydin & Yildiz, 2014, p. 160, as cited in Vygotsky, 1978). Students, then, should recognize the process of conducting thorough research in order to become well-informed citizens on current critical issues.

For the final project, students worked in small groups for seven weeks to produce one research paper. Students had to complete several deliverables, including an annotated bibliography, two progress memos, two drafts (a 25% draft and a 50% draft), and a presentation. The project required students to trace their chosen social justice issue over a ten-year period and document the conversations related to that issue. Students were tasked with using various primary and secondary sources to trace the origins of their chosen issue. Additionally, they needed to identify and explain the factors and influences that have impacted the evolution and advancement of

their issue. Students also had to synthesize sources to show a dialogue among the sources and consider three perspectives on their issue.

The group research paper was worth 60 points. Grading was based on a rubric evaluating format, citations, and content. Format checks included font, margins, headings, and numbering. Citations, in APA or MLA style, required a works cited page and in-text references, with at least eight sources, of which three to four must be peer-reviewed articles. Content assessment involves thoroughly reviewing the introduction, body, and conclusion. The introduction had to define the issue, highlight its significance, and outline three perspectives. Each perspective had to be presented fairly and comprehensively, with a clear pitch, complaint, and moment, and included a direct quote from a real person. The body had to demonstrate a decade-long conversation among the perspectives, with clear transitions and signposts. The conclusion had to propose a middle-ground position, explaining its benefits to each perspective and its significance to the conversation. The paper needed to be 10–12 pages long.

The task of completing the written part of the project was achieved via a shared document. Groups either wrote their research paper (including the deliverables) in Google Docs or Microsoft Word (which was accessed through Microsoft Teams); groups decided where to write based on their preference. Both options provided students with the capability to write, comment, edit, and perform many other actions in real-time collaboration with their group members. The capabilities afforded through these online word processing programs allow the learning to be realized. The literature has focused on platforms that make collaborative writing possible, with most studies citing Wikipedia as the common choice (Daemmrich, 2010; Kessler et al., 2012). For example, Kasemvilas and Olfman (2009) explained why Wikipedia is an ideal platform for collaboration: "When learners gain new knowledge, they can come back to modify what they have previously written in a wiki. They can read what other users write, generate meaning through shared comprehension, refine and reshape their perceptions, and share or negotiate their understandings with other users" (p. 48). Collaborative writing platforms, such as Google Docs and Microsoft Word (Word integrated within Microsoft Teams), offer features akin to Wikipedia. This capability allows students to experience comparable benefits in their chosen platform, even if it is not Wikipedia.

Instrument

Given the research goal of discerning the sources of students' knowledge and the type of knowledge they can gain from participating in a group writing project, the decision to use a survey was made with careful consideration. This choice was mainly due to a survey's inherent capacity to identify patterns and facilitate a thorough comparison of responses. This approach streamlines data analysis and guarantees a precise and efficient assessment of learning outcomes. The decision to use a survey was also influenced by the cost-efficiency and effectiveness of online surveys, which can be rapidly distributed to a large group of participants. Finally, using a survey ensures anonymity, providing a secure environment for respondents to give truthful answers without fear of identification (Jones et al., 2013).

In this research study, a survey was distributed to the students through Qualtrics, which aligned with the due date of the final project. The students were given a timeframe of approximately one week to complete the survey. The survey consisted of 20 questions (refer to Appendix) designed to gather information about the student's writing experiences in relation to their final project. Each survey question presented an array of options, meticulously curated based on my teaching experience and specific familiarity with the writing course. In an effort to capture a holistic view of students' perspectives and circumvent the constraints of predefined choices, an open-ended option was

incorporated in the questions that did not strictly adhere to a yes, no, or maybe format. Questions with this open-ended option were labeled 'Other' in order for the participants to provide their responses, ensuring a more authentic and comprehensive understanding of their perspectives when reflecting on their project experience.

Participants

The College Composition II class had a total of 72 native English speakers enrolled across its four sections. These students were a mix of first-year and second-year students, pursuing a wide variety of majors. The majority of studies on collaborative writing have primarily focused on non-native speakers of English (i.e., EFL/ESL), exploring their experiences, attitudes, and perceptions toward collaborative writing (Ahmad, 2020; Chen, 2019; Du, 2018; Li & Zhu, 2017). I deemed it crucial, then, to contribute to this body of literature by specifically investigating the experiences, attitudes, and perceptions of native speakers of English. This endeavor seeks to enrich our understanding of how collaborative writing practices among native speakers both diverge from and align with those of non-native speakers. This comparative approach provides a more nuanced perspective on the dynamics of collaborative writing across different linguistic backgrounds.

From a potential pool of 72 students, 30 opted to participate in the study by giving their consent for their survey responses to be used. This decision was made independently by the participants, ensuring that they had complete control over the sharing of their survey data; no extra credit or monetary compensation was provided.

In the initial phase of group formation, students were prompted to identify three social justice issues they were keen on exploring. These issues were then shared on a discussion board for other students to see. Afterward, I recorded each student's choices in Microsoft Excel to facilitate the group-formation process. The primary criterion for forming groups was a shared interest. Students who had a mutual interest in a particular topic were grouped together. For example, if 'Black Lives Matter' was a shared interest among three students, they formed a group. This method was applied iteratively until all students were part of a group. Considering the commonality in topics of interest, each student was assigned to a group that included at least one issue they had selected.

Groups consisted of three or four students, a standard range with collaborative writing projects (Blin & Appel, 2011; Dobao, 2014; Kessler et al., 2012). The decision to have a minimum number of three and a maximum number of four stems far beyond the simple fact that this is the range seen in most research studies. Instead, the range stems from the learning benefits of having more than two people in a group. Dobao (2014) found that groups that consisted of four students produced more accurate language-related episodes (i.e., past tense morphology) than students that worked in pairs, which explains the minimum number of three students in my research project. The cap of four students was based on Kessler et al.'s (2012) study, in which the researchers discovered that there was unequal contribution from students in groups of three (i.e., each team had a student who contributed 45–50% of the activity workload, another student contributed 30–40%, and another contributed 15–25%) (p. 97). If there were unequal contributions in groups consisting of three members, then having four or more may increase the rate of students having varying levels of contributions. At the same time, having an even number in a group may lead to one pair working on one aspect of a project and another pair working on something else, which explains my decision to max out the groups at four students.

Data/Findings

In this research study, I collected data from a group of thirty students. The data set was meticulously compiled, focusing on the most

frequently given responses from a set of twenty survey questions. Of these, twelve questions were particularly crucial in shedding light on my research questions, thus guaranteeing a focused and relevant analysis. It is worth noting two points. First, none of the students chose to provide their own responses using the 'Other' option available for the survey questions. Instead, for the questions central to the analysis, all participants opted for one of the predefined answer choices. These selections have been summarized in the Data/Findings section. Second, the student quotes featured in the Data/Findings and Discussion sections are responses to question 11, which asked students to explain their learning process and the specific knowledge they gained.

Based on the data, students found that the collaborative project, as a whole, elevated their understanding of writing concepts and social justice issues. Participating in the group project yielded substantial learning benefits for the students. For instance, when surveyed about the impact of collaborative work on their writing skills, 70% of students (21 out of 30) affirmed its positive effect. Looking into specifics, 50% of the students (15 out of 30) reported learning how to construct a Rogerian argument and compile an annotated bibliography. Moreover, 46.6% of students (14 out of 30) felt their peers taught them how to organize and structure their writing, and 43.3% of students (13 out of 30) believed they had acquired the skill of integrating sources into a dialogue/conversation. One student wrote, "I also learned some writing knowledge from other people's comments, such as the proper placement of paragraphs and the proper transition between paragraphs."

Additionally, the data revealed that 33.3% of students (10 out of 30) stated they learned how to craft effective sentences and paragraphs. The same percentage of students (10 out of 30) also reported learning to synthesize content from multiple sources into a cohesive piece, use an appropriate tone and style for their intended audience, and perform in-text citations in MLA or APA format. In addition to writing-related benefits, students reported they gained knowledge from their peers in other areas. These included an improved ability to identify the rhetoric used by individuals or organizations to disseminate their social justice message (28 out of 30 students), improved proficiency in using certain features of Microsoft Teams (15 out of 30 students), and a better understanding of how to provide constructive feedback on their peers' work (15 out of 30 students). One student reflected, "By working with my teammates, I also learned how to properly fuse together the work of other people and learn how to allocate work, take corrections from others, and give good critique."

Before exploring the specific subject matter knowledge that the students gained, the survey responses shed light on the sources of their learning. The data draw attention to the students' role in fostering an environment conducive to gaining new insights into a social justice issue. According to the survey data, 93.3% of students (28 out of 30) attributed their newfound understanding of their social justice issue to their research efforts. This independent research facilitated knowledge sharing among teammates, which explains why 83.3% of students (25 out of 30) considered team discussions a significant source of their learning. As support, one student wrote, "I mostly read articles from UM library online database and discussed my ideas with my teammates." The collaborative nature of the project also played a crucial role in knowledge acquisition. In fact, 76.6% of students (23 out of 30) reported having read their classmates' contributions that led them to gain different perspectives on the issue, 73.3% of students (22 out of 30) reported having conducted research specifically to share their findings with their teammates, and the same percentage (22 out of 30) were able to exchange and discuss their ideas with their peers. One student wrote, "My teammates gave me important information that I have never learned before." Along the same line, another student wrote,

"However, when briefly discussing the issue with my teammates, I did learn a new perspective on the debate on the right of felons to vote." Lastly, 70.0% of students (21 out of 30) believed they had learned to collaborate with others in order to locate and gather information on their issues.

The survey also revealed that collaboration served as a catalyst for knowledge exchange. The results indicated that 86.6% of students (26 out of 30) believed they had gained new knowledge from this collaborative experience. Specifically, 70% of students (21 out of 30) felt that writing collaboratively with their classmates contributed to their learning. For example, one student wrote, "When my team members wrote their part and when we were trying to format the paragraphs into a conversation, I learned mainly how the perspectives correlate to one another." Interestingly, only 50% of students (15 out of 30) believed they would have learned more about their social justice issue if they had worked individually on the project. When asked about the specific knowledge they gained from their teammates, 63.3% of students (19 out of 30) reported learning about different events that highlighted the issue, and 60.0% of students (18 out of 30) reported having learned some historical context surrounding the issue.

Moreover, the data further revealed that 53.3% of students (16 out of 30) reported identifying the major players involved in the issue, and the same percentage reported learning a different perspective on the issue that they had not previously considered. As one student reflected, "One thing I did not know regarding LGBTQ rights was that the issue had started many years ago reaching back to the 1980s. I also learned that Delaware was the first state to legalize same sex marriage in 2004. …These facts were all learned from my teammates." Furthermore, 40% of students (12 out of 30) believed they had learned about the event, person, or organization that initiated the social justice issue. For example, one student wrote, "Each group member focused on the different congresses ranging from the 111th congress to the 115th, so by reading my partners paragraphs I learned a lot about the different events that took place during those years." The same percentage of students (12 out of 30) reported having learned the meaning of some terms or phrases commonly associated with the issue, and they also believed they had recognized a correction to their misunderstanding of something related to the issue.

Ultimately, the survey findings emphatically underline the pedagogical significance of collaboration. The collaborative effort of undertaking the group project served a dual purpose. It not only enabled students to gain new insights and viewpoints on their chosen social justice issue, but it also provided an opportunity for them to refine their writing skills, thereby enriching their overall learning experience.

Discussion

In a collaborative sense, when students question and critique each other's work and participate in active dialogue, they are, in effect, learning and growing their knowledge about the content material based on the contributions of others. Team collaboration, then, facilitates the sharing of knowledge. This knowledge-sharing is achieved primarily through oral communication. Feur (2011) believed that oral communication was the driving factor behind the benefits of collaboration. The students in Feur's study heard vocabulary and grammar repeated in conversation and began adopting the new material into their essays. Feur's findings are reflected in the study at hand because 83.3% of the students believed that an active dialogue on their social justice issue with their teammates was a source of their newfound knowledge. A response from one of the participants supports this idea: "[M]ost of my learning came from discussing research finds with the group." Observing students articulate their findings during class workshops, where they had the opportunity to share, challenge, and question each other's perspectives, underscored the

advantages of knowledge exchange through collaboration.

Even a silent dialogue with oneself can be considered collaborative because it involves integrating insights from others' work into one's existing knowledge repository. This silent dialogue was seen in 76.6% of students who read different perspectives on their social justice issues, which were composed by their teammates. As a case in point, one student wrote the following: "In order to understand the parts of the paper people on my team were discussing, I read their parts and learned about their chosen perspectives." This learning process is generated based on the idea that everyone possesses different levels of knowledge on various topics and that people complement each other's strengths and weaknesses (Deveci, 2018; Donato, 1994). There are also times when students might not be cognizant of the boundaries or precision of their knowledge (which can include both writing- and non-writing-related concepts). Some students discovered and corrected a misconception they had about their social justice issue. The survey data revealed that 86.6% of students acquired something they did not know before regarding their social justice issue. As one student wrote, "I didn't know that the Bush Administration pushed for immigration reform. Before I think I had assumed that because he was a Republican president he supported something closer to closed borders. I learned this through collaborating with my teammates and comparing their information with mine." Nonetheless, when students are challenged or encouraged by their peers to think more critically and analytically about a topic, they may gain a renewed understanding of what they know, or thought they knew.

Given the magnitude of a research project, coupled with students' personal commitments and limited time, the task of conducting thorough research single-handedly can seem daunting. This is precisely where the power of collaboration shines. By strategically dividing the research tasks among several individuals, not only does the research and writing process become considerably more manageable, but it also transforms into an enriching learning journey. The participants of this study agreed with this sentiment. One student noted, "Since we divided some of the research I learned about different aspects of the issue from some of my group members." While students are fully capable of undertaking a research project independently, many prefer the collaborative approach of a group writing project when given the option. In fact, 63% of the participants (19 out of 30) in this study believed the social justice project should be written collaboratively. This preference is likely due to the opportunity to share the workload, which in turn lessens the burden on each individual. Consequently, reliance on team members becomes crucial for collectively managing the breadth of research projects. This collaborative process allows for an equitable distribution of tasks and promotes a learning environment where students can mutually benefit from each other's insights and findings.

Furthermore, there can be times when students do not want to expand their viewpoint beyond what they are comfortable with or believe to be true. Indeed, when students participate in a group project where diverse viewpoints on social justice issues are expressed, they are exposed to these novel perspectives. This exposure, facilitated through attentive listening and reading, has the potential to reshape their understanding and enrich their comprehension of issues. This phenomenon was seen in 53.3% of students (16 out of 30) who learned a different perspective on their issue that they had not previously considered. One student wrote, "I never knew of the perspective on how many believe that the gender wage gap is not a real issue. While I still disagree with the viewpoint when researching it did provide some useful information on how a lot of data on the issue tends to be flawed and skewed." Writing collaboratively, then, provides students with new knowledge or viewpoints that they may not have gotten otherwise, a notion concurred

by 70% of the students participating in the study.

Mishra (2015) expressed a similar position: "The ontological truths of the participants (their worldviews, knowledge, skills, attitudes) have to be 'informed' by dialogue with ontological truths of others. People do not simply expose their equal truths but address, response [sic], take responsibility, evaluate, and judge each other truths" (p. 78). Collaborative activities unite students, creating an environment that promotes cognitive development and creativity. Such an environment was experienced by 73.3% of students who engaged in research in order to share and discuss their findings with their peers; students desired to pass what they learned on to others for their benefit. One student wrote, "My learning process consisted of researching different sources and perspectives and then discussing them with my group members." In a group setting, learning transcends individual limits, becoming a more achievable group objective.

While the literature has extensively explored how students who wrote collaboratively were provided with the opportunity to learn grammar and vocabulary from each other (Allagui, 2023; Deveci, 2018), this research study at hand illustrates subject matter learning beyond just English language skills. Given that the students were assigned to investigate the history, progress, and current status of a social justice issue, the knowledge they acquired was primarily focused on the content related to their selected issue. Students indicated they gained insights into events that illuminated their issues. Some students deepened their understanding of their issue's historical context, and some identified key individuals involved in their social justice movement. Additionally, the students in the study believed they became aware of the varied viewpoints held by people regarding the issue. One student said, "I learned more about the topic [Affordable Care Act] from discussing with my peers." The realm of learning extends far beyond traditional teacher-led instruction. The power of peer-to-peer learning, an evolving process that unfolds both within the classroom walls and outside world, is pivotal in shaping a student's educational journey. It is incumbent upon students to acknowledge and embrace their integral role in cultivating and propagating knowledge, which was emphasized in this research study.

One aspect that this research study intended to underscore was the variety of non-writing-related knowledge students could gain. In the group project context, learning encompassed writing principles and the essential tools and technology needed to execute the writing tasks. From the study, some students were more proficient with technology than others. Regarding non-content knowledge, students stated they learned how to use some of the technology features of Microsoft Teams (as indicated by 50% of the participants); these technology-acquired benefits were similarly expressed by the findings of Allagui (2023), Daemmrich (2010), and Deveci (2018). Additionally, writing with students who each have their unique style can help students develop strategies for planning, organizing, and writing with multiple authors (Daemmrich, 2010). The survey data at hand revealed that 46.6% of students felt that their peers taught them how to organize and structure their writing. Additionally, some students acquired knowledge on writing-related concepts (33.3% stated they learned how to craft effective sentences and synthesize content from multiple sources). As students engaged in reading and learned the art of collaboration, they each strived to maintain the coherence and cohesion in their collective research findings and written work. Students were reminded that their final project had to be read as if it were written by a single author rather than seeming like disjointed pieces of work hastily put together without consideration for the flow of paragraphs. Learning and cooperation, then, involve an intimate connection to other people (Kasemvilas & Elfman, 2009), so it is critical to place students in groups to increase the odds

of peer-to-peer learning.

From time to time, the task of crafting comprehensive research papers can appear insurmountable to students. Drawing from my experience as a writing instructor, the most recurrent grievance I have encountered is the lack of time students devote to writing papers (whether that comes from a lack of interest or otherwise). However, adopting collaborative writing strategies can significantly mitigate this stress, transforming the often-tedious research and writing process into a more engaging and enjoyable experience for students. Daemmrich (2010) found that students would recommend collaborative projects as a renewed way of writing from individually graded papers. The students found their joint paper to be more thorough and varied. Additionally, they reported that collaborating with others on the paper reduced their stress levels (p. 164). Participants from Allahu (2023) expressed support for collaborative projects because of the benefits of equally sharing the workload.

The beliefs held by the students from Daemmrich and Allagui's study were similarly endorsed by the participants of this research study at hand when they were asked whether they believed more writing projects and college courses, in general, should be completed collaboratively. Considering the significant number of students who derived substantial benefits from the social justice group project, the survey data showed that 46.6% of students believed that more writing projects should be completed collaboratively. The support for collaborative projects underscores the benefits of shared workload and suggests a growing preference for more collaborative approaches in academic writing projects and coursework. Students should engage in elaboration, that is, expanding on what they are studying by generating examples, analogies, or imagery (Endres et al., 2017). These factors can be incorporated by helping students generate questions, create personalized study tools, or engage in dual processing, discussed in turn below. The section ends with final considerations for helping students see the benefits of the generation effect in order to improve their studying.

Conclusion

In the aftermath of the COVID-19 pandemic, collaboration has emerged as a vital tool for bringing people together. It not only fosters connections but also deepens understanding of subject matter content. Collaboration invites a diverse, multicultural student body into a shared space for teaching and learning. With the findings from this research study, instructors across disciplines can design assignments that promote collaborative writing and, by extension, collaborative learning. Writing instructors can discover new methods to incorporate collaboration into their writing assignments, thereby accelerating the learning of course materials. It is crucial for writing instructors to prioritize the development of projects that intellectually engage students. This pedagogical approach cultivates an environment where students can absorb fresh insights and broaden their understanding of different topics through dialogue and knowledge exchange with their peers (Kasemvilas & Olfman, 2009).

Collaboration, whether in person or virtually, has become a standard practice. It is set to influence the future of both educational settings and professional environments (Bush & Zuidema, 2013; Wang et al., 2017). Teaching students the value of teamwork will allow them opportunities to learn how to work with people of differing perspectives and skills. In a collaborative setting, students shift from focusing on their tasks to becoming team players with a shared task. They start to see how their work can influence the overall success of the group project. In other words, they realize that every contribution can significantly affect the project's outcome. Within the dynamic sphere of a collaborative environment, students transform into intellectual allies, learning to distribute decision-making duties and striving for a collective agreement on the group deliverable (Allen et al., 1987).

The findings from this research study illustrate the positive benefits of working together on a group writing project. Such an approach allows students to gain not only content knowledge, such as information on their social justice issues, but also non-content knowledge, like mastering the features of Microsoft Teams or essential writing skills. Collaborative writing not only helps students complete research project deliverables efficiently–as experienced by the participants in this study–but also provides them with skills that can be applied in professional work environments. Daemmrich (2010) discovered that collaborative writing taught students to regard their classmates as co-workers, highlighting the importance of negotiation, compromise, flexibility, and group responsibility (pp. 166-167). Many high-stakes professional documents are produced collaboratively, reinforcing the notion that collective writing efforts yield a more robust product (Bush & Zuidema, 2013). The skills students from the research study at hand acquired from this collaborative writing project, such as discussing ideas and making decisions as a team, can be used in other group projects in future classes and future careers.

In closing, collaboration is the cornerstone of higher education (Kasemvilas & Olfman, 2009). It is important, therefore, to teach students how to work together to maximize the benefits of collaboration. Collaboration is a skill that can be taught and needs to be taught. Cecil-Lemkin (2022) argues for instructors to structure collaborative projects, including teaching collaborative skills, intentionally building teams (i.e., putting allies together, such as putting students with disabilities together), providing clear divisions of labor, and offering the option to work individually.

The insights from my study can serve as a framework for educators seeking to revamp their curriculum. They can turn individual writing tasks into group assignments to optimize learning outcomes. This pedagogical approach can instill an amplified sense of self-assuredness in students, empowering them to accomplish tasks with minimal reliance on teacher intervention. The learning journey, especially at the collegiate level, transforms into a more enriching and holistic experience in an environment that advances active dialogue among learners. Students are presented with an opportunity to sharpen their research and writing competencies through the power of collaborative learning. This interactive process enhances their academic skills and broadens their intellectual horizons as they investigate diverse subject matter content and more.

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Self-Regulated Learning in Developmental Literacy Courses: Examining the Alignment of Learning Outcomes, Students' Goals, and their Metacognitive Literacy Practices

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ABSTRACT

Developmental literacy courses aim to strengthen students' postsecondary reading and writing. Despite scholarship on racial literacy, linguistic dexterity, and metacognitive strategies and processes, little information exists about students' literacy goals related to student learning outcomes and student perceptions of class activities. In this study, we analyzed the alignment of students' literacy goals and strategy use with student learning outcomes in a developmental literacy context with a raciolinguistic justice-oriented curriculum. Drawing from Boekarts' (1995) self-regulated learning theory, we used thematic analysis to examine students' self-reported literacy strategy application and their awareness of cognitive processes within their literacy activities. Findings experienceed a strong alignment between students' literacy goals with perceptions of course activities and learning outcomes. Also, students demonstrated metacognitive awareness was largely limited to reading; however, students made few connections to the course's racial literacy theme. Strong relationships existed between students' literacy goals, instructional strategies, and achieved learning outcomes to inform future applications for self-regulation instruction in developmental literacy contexts and beyond.

Keywords: Literacy Goals, Literacy Strategies, Postsecondary Literacy, Self-Regulated Learning, Metacognition, Raciolinguistic Justice, Racial Literacy

In a growing number of postsecondary literacy classrooms, tension exists between institutionally mandated Student Learning Outcomes (SLOs) focused on academic skills development and instructors' focus on critical literacy, including racial literacy (i.e., critical racial consciousness; Grayson, 2017; Sealy-Ruiz, 2013) and linguistic dexterity (i.e., ability to communicate in language varieties expanding beyond formal edited American English; Suh et al., 2022; Young, 2020). Furthermore, neither perspective centers on students' literacy goals or their understanding of and willingness to engage with course SLOs. This tension is most evident in developmental literacy courses that aim to bolster students' college-level literacy skills (Sánchez & Paulson, 2008; Perin & Holschuh, 2019). Although developmental literacy scholars have long advocated for explicit metacognition (El-Hindi, 1997) and strategy and process instruction (Stahl & King, 1996), little is known about students' literacy goals—or their alignment with instruction. In addition to goal setting, reflecting on actions to achieve goals is essential to self-regulated learning (SRL; Boekaerts, 1995), yet little is known about how developmental literacy students set, monitor, and achieve goals, particularly in classes that apply a critical literacy perspective.

To address these gaps, this study recenters examinations of students' literacy development with their reported and demonstrated progress towards their goals. We examined students' literacy goals, their alignment with course learning outcomes, and students' perceived literacy strategy application in a developmental literacy course with a raciolinguistic justice-oriented curriculum. The study was thus guided by the following questions:

- What literacy goals do students articulate for a developmental literacy course oriented around developing students' racial literacy?
- What is the alignment between students' literacy goals and course Student Learning Outcomes in a course oriented around developing students' racial literacy?
- What is the alignment between students' articulated literacy goals and their understanding of course literacy activities?
- How do students demonstrate metacognitive awareness in their literacy strategy-use to achieve their goals?

Literature Review

Postsecondary literacy scholars have long acknowledged the role of metacognition in reading. However, metacognition for literacy goal achievement or as a function of self-regulating college reading activities remains underexplored (Cromley, 2023; Talwar et al., 2023). Although some postsecondary literacy practitioners recognize the particular importance of metacognition and self-regulation in antiracist reading (Inoue, 2020) and raciolinguistic justice-oriented literacy instruction (Suh et al., 2021; Howell et al., 2020; Williams, 2021), we are unaware of any literature explicating the connections between SRL and the larger critical literacy umbrella, which encompasses raciolinguistic justice. Raciolinguistically justice literacy instruction foregrounds students' racialized linguistic identities as valuable resources to their linguistic dexterity, or the ability to deploy range and mixture of codes and styles to maximize communicative effect (Suh et al., 2021; Williams, 2021). We view the implementation of any curriculum, including but not limited to raciolinguistic justice, as impacting students' domain-specific metacognition. As a result, this study explored SRL and postsecondary literacy applications of metacognitive instruction within the context of a raciolinguistic justice-oriented course.

College students must be able to apply a range of literacy strategies. However, students may be unaware of how to apply these strategies toward common academic literacy demands, such as being able to read and paraphrase lengthy texts or articulate and evaluate an author's claim. In her examination of student perceptions of their reading capabilities in developmental courses, Valeri-

Gold (2003) found that students perceived their interest in learning as the primary factor influencing their reading ability. Less frequently, students referenced motivation and purpose, which aligns with developmental literacy and learning pedagogy (Holschuh & Paulson, 2013; Weinstein & Acee, 2013).

By implementing SRL techniques to actively engage with information, students can enhance their learning by developing more significant and easily retrievable understandings of course materials (Weinstein & Acee, 2013). Zimmerman (2000) defined SRL as the process in which students believe in their ability to take the right actions, think effectively, manage their emotions, and behave appropriately to achieve their academic goals, while also being aware of their progress and thinking about how they're doing it. As such, SRL is an important contributor to students' sense of self-efficacy (Bandura & Wood, 1989). Although few college classes explicitly address students' self-regulation (Zusho & Edwards, 2011), students can be taught to strengthen their cognitive, metacognitive, and motivational strategies (Weinstein et al., 2000). For instance, Maftoon and Tasnimi (2014) found that teaching techniques with self-regulation reading tasks, informed by Zimmerman (2000), increased reading comprehension for multilingual college students by developing independence in reading skills. Specifically, reading tasks where students reflected on and evaluated metacognitive reading strategies.

Developmental education in particular purports to strengthen students' comprehension and regulation of the academic discourses they encounter during their college experience (Paulson, 2012). In both developmental literacy and broader postsecondary education contexts, domain-specific metacognitive knowledge plays a crucial role in shaping students' perceptions of their learning experiences. Specifically, metacognition refers to the conscious awareness and understanding of one's cognitive processes; metacognition supports learners' monitoring, control, and self-guidance toward a specific goal (Harris & Hodges, 1995). Cognitive monitoring models frequently include metacognitive experiences and knowledge within the models' clusters of information related to self, task, and strategies as contributing to the accomplishment of task objectives (Israel et al., 2006). Developmental literacy scholars have also demonstrated how metacognitive strategies can enhance students' comprehension, problem-solving skills, and overall cognitive flexibility (Holschuh & Paulson, 2013). Developmental educators can offer essential support and guidance in metacognitive skill development (El-Hindi, 1997). In turn, metacognition can strengthen students' positive perceptions of their learning by improving their ability to understand and regulate their learning processes (Holschuh & Paulson, 2013). By helping students develop metacognitive knowledge and SRL skills, developmental education courses aim to improve students' academic performance and increase their overall success in and outside of college. However, existing scholarship on metacognition and self-concept has not been replicated in instructional contexts that encourage students to explore the ways that race and racialization occur through language use or to explore their literacy goals in such instructional contexts.

Seeking to address the literature gap related to students' literacy goals and student learning outcomes within a course that explored the intersection of race and language, the present study applied an SRL framework to examine the association between students' literacy goals and perceptions of their literacy strategy use In particular, we examined the alignment of students' literacy goals, development, and metacognitive practices with course SLOs as developmental literacy instructors.

Positionality

We, the authors, identify as developmental literacy instructors. The first author serves as coordinator and instructor in

the developmental literacy program in which data was collected, and the other authors currently or have previously taught in the program using the raciolinguistic justice curriculum. We also identify as teacher-scholar-activists (Suh et al., 2021; Sullivan, 2015) and, as such, we "accept and embrace the revolutionary and inescapably political nature of our work . . . [that] seeks to create positive change in our communities and on our campuses" in support of the students we serve (Sullivan, 2015, p. 327–28). As teacher-scholar-activists, we sought to understand the connection between students' literacy goals, as a part of their self-concept or identity, and their perception of their developmental literacy course. This work is an essential but underexplored aspect of the asset-based pedagogies drawing upon students' identities and discursive goals in their learning (Gay, 2018; Paris & Alim, 2014).

Methodology

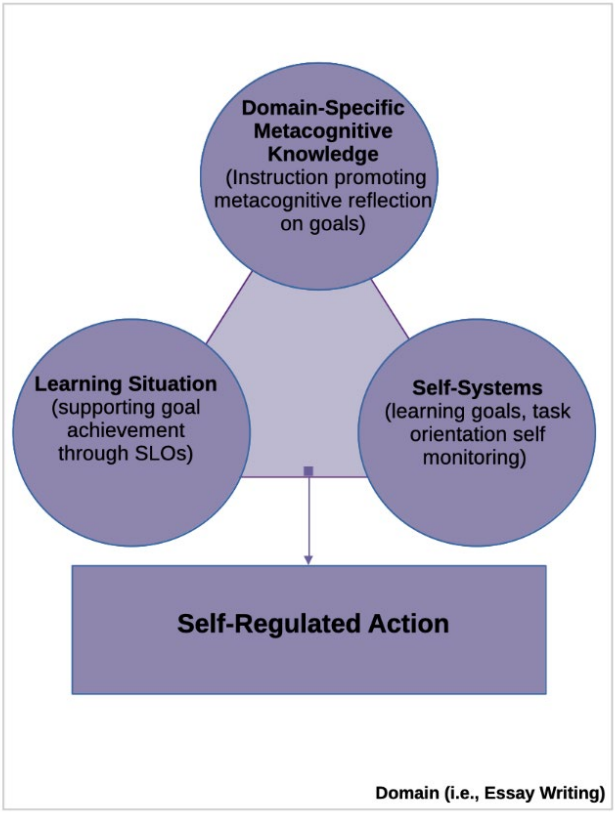
This study extends prior examinations of SRL in developmental education contexts (Bailer, 2006; Weinstein & Acee, 2013) with a focus on alignment between SLOs and students' literacy goals and development, and their metacognitive practices in a developmental course with a raciolinguistic justice-oriented curriculum. Thematic analysis (Braun & Clarke, 2019) illuminated goal overlap and discipline-specific metacognition by centralizing repeated meanings within our analysis (Vaismoradi et al., 2013). Following Xu and Zammit (2020), we applied a hybridized analytical approach with inductive then deductive coding.

Theoretical Perspective

Our analysis and interpretation of students' responses followed Boekarts' (1995) description of SRL (Figure 1). We thus conceptualize self-regulated action as being domain-specific (i.e., occurring within specific disciplinary and task-based contexts) and influenced by: (1) the learning situation, specifically SLOs directing instructor and student engagement (Dincer et al., 2019), (2) domain-specific metacognitive knowledge, specifically instruction promoting students' metacognitive goal setting to increase SLOs attainment (Burke & Mancuso, 2012; Lawlor, 2012), and (3) self-systems, specifically learning goals, task orientation, and self-monitoring for goal attainment (Borkowski et al., 2000; Weinstein et al., 2011).

Figure 1

Self-Regulated Action



Students' understanding of their cognitive processes, or their metacognition, supports their goal attainment (Harris & Hodges, 1995) and enhances comprehension and problem-solving skills (El-Hindi, 1997, 1995; Moktahri et al., 2018). Metacognitive

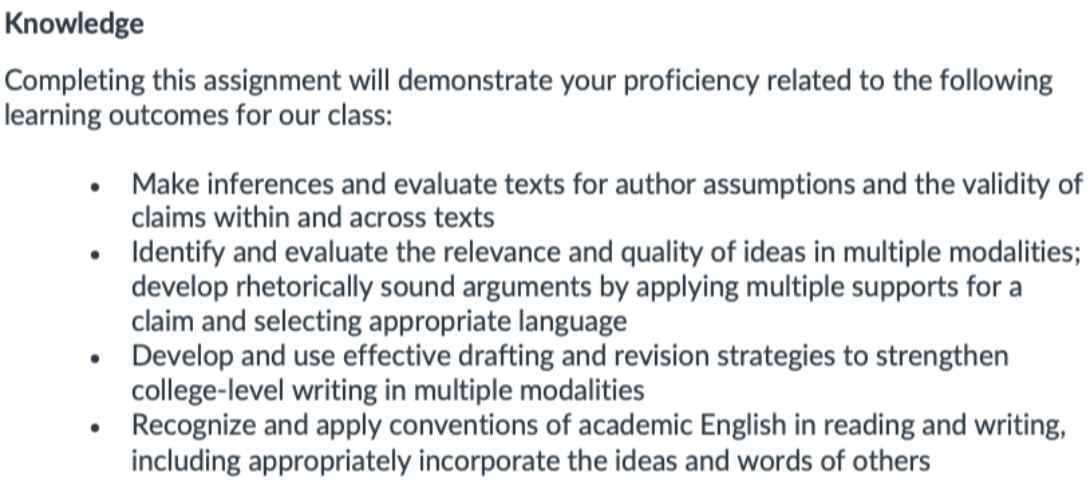
understanding of reading comprehension and vocabulary development also serve as strong predictors of early college success (Talwar et al., 2023) and is frequently an aim in developmental literacy instruction (Holschuh & Paulson, 2013; Paulson, 2012). We sought to understand students' literacy goals, as a component of their self-system, within a learning situation influenced by SLOs and the context of students' domain-specific metacognitive knowledge about literacy strategy application, for instance, their use of global, support, or problem-solving strategies (Mokhtari & Reichard, 2002). With this framework, we examined the alignment between students' literacy goals and SLOs and students' metacognitive awareness of how class activities support literacy goal attainment using focus groups and individual interview data.

Data Collection

The study occurred at a large four-year university in the southwestern U.S. with student participants enrolled in a developmental literacy course. During the 2022-2023 academic year in which data was collected, nearly 1,400 students at the university were referred to developmental literacy courses. The courses followed an integrative reading and writing model, and curriculum design was dually informed by statewide SLOs focused on traditional academic literacy skills and the program's unique raciolinguistic justice-oriented curriculum which sought to increase students' awareness of the intersections of race and language—and the ways that these intersections impact how language is produced and understood (Williams, 2021). The focus on racial literacy was not included in the course SLOs; however, it framed many course assignments and influenced text selection. At times, these two forces may have created competing pressures within the learning situation as assigned texts and writing tasks were designed to develop students' critical consciousness of their own literacy goals and develop reading and writing strategies to support these goals (Suh, 2022; Suh & Dyer, 2022). Assignment descriptions included an explanation of focal skills and their relationship to course SLOs for students to review and consider (Figure 2).

Figure 2

Sample Assignment Text with Course SLOs



Knowledge

Completing this assignment will demonstrate your proficiency related to the following learning outcomes for our class:

- Make inferences and evaluate texts for author assumptions and the validity of claims within and across texts
- Identify and evaluate the relevance and quality of ideas in multiple modalities; develop rhetorically sound arguments by applying multiple supports for a claim and selecting appropriate language
- Develop and use effective drafting and revision strategies to strengthen college-level writing in multiple modalities
- Recognize and apply conventions of academic English in reading and writing, including appropriately incorporate the ideas and words of others

During the Spring of 2023, students from 10 of the institution's 35 developmental literacy sections were invited to participate in this IRB-approved study. Selected sections were taught by a lecturer (i.e., a full-time instructor) with previous experience teaching the curriculum. Students were invited to participate in the study for extra credit worth one metacognitive reading log, an assignment in which students choose to reflect on their process of reading one of the assigned course texts. As a part of their participation in the course, students were required to complete at least five of the eight reading logs.

Although some practitioner-scholars might question the use of extra credit as motivation for soliciting student participation in research, we felt it important to compensate students for their time and expertise. As such, and to maintain ethical research standards, we followed the University of Massachusetts-Amherst's (2022) Research Administration and Compliance recommended practice of offering an equivalent amount of extra credit for participating in the study or a comparable alternative activity. The metacognitive reading log assignment was chosen as comparable to participation in the study because the interview and focus group questions were similar to the assignment in their metacognitive focus. Students were informed that they would receive extra credit regardless of their participation in one or both the focus group and follow-up interviews. Students who opted out of the study could complete an additional reading log for an equal amount of extra credit. Students who were enrolled in sections that were not asked to participate in this study could either complete an additional log or participate in one of two other research studies of comparable time investment for extra credit.

During class visits, the first author invited students to participate for extra credit. In the first author's section, students were invited by the third author who managed student enrollment in the study and maintained participant confidentiality (i.e., the first author, who was the only current instructor at the time of data collection, did not learn which students from her section had participated in the study until data collection concluded, then she received a list of names of students who were to receive extra credit). Using a completed electronic survey from students, the third author provided pseudonym student names and contact information to other members of the research team to schedule focus groups and interviews.

A total of thirty-seven students participated in 15 focus groups and 22 individual follow-up interviews recorded in Zoom (See protocols in Appendix A, B; see Table 1 for self-reported demographic data). Focus group questions elicited students' literacy goals, perceived connections between course SLOs with students' stated goals, and literacy instruction preferences. Individual interviews elicited student reflections about reading and writing tasks relevant to their literacy goals. During interviews, students used share-screen mode to discuss a completed and graded reading assignment and writing assignment, describing their literacy strategy approach, instructor feedback, and the assignment's relevance to their goals.

Table 1
Student Demographics

Race	Gender		Total number of students
	Female	Male	
African American	2	6	8
Hispanic	15	6	21
Unknown	2	-	2
International	-	1	1
White	3	2	5
Total	22	15	37

The follow-up individual interview format explored students' domain-specific metacognitive knowledge as students were asked to reflect upon how they completed a particular assignment as well as their purpose for the various activities or tasks in which they engaged to achieve that purpose. An example that illustrates this is when Mateo (all names used are pseudonyms) described his decision to include a translation of his song lyrics in English, "so that anyone that is reading could understand it." As he made this decision about translation, however, he also weighed what was lost in translation: "Because there are certain affections and different things that mean different sayings or that don't necessarily translate in English. It's just kind of like a feeling or something." Ultimately, Mateo decided to leave these phrases in Spanish: "Picking those certain words or slang from the community, I think was what helped me achieve my goal or purpose." Additionally, the interview protocol also asked students to react to instructor feedback on completed assignments further increasing researchers' understanding of students' perceptions of course literacy activities and their strategy use in effectively communicating and achieving their literacy goals. Next, we further share our processes for how we analyzed students' interview data.

Data Analysis

Applying thematic analysis (Braun & Clarke, 2019), we divided the data into meaning units, identifying similarities among students' goals to establish in vivo codes. As a group, we collectively identified the most frequent in vivo codes to form themes. We applied these themed in vivo codes and SLO-generated codes to descriptions of students' reading and writing processes (e.g., Student Goal: Active Reading related to "When I read, I like to find keywords or big words that I don't understand that easily influence the context of what the sentence is saying and the article as a whole," Santiago). We further identified alignment between Santiago's goal and the SLO "Apply active reading strategies to a variety of academic texts" (see Tables 2 and 3). Comparison of literacy strategy enactment to assignment documents, rubrics, and instructor feedback aided our identification of alignment between student goals and SLOs and therefore our understanding of students' literacy goals as a component of their self-regulated actions in class.

Next, we sought instances of students' metacognitive awareness of their literacy

strategy application by deductively analyzing the data for students' intentional strategy application and awareness of their thinking in their literacy processes (Braun & Clark, 2019). Researchers met for intercoder reliability checks and discussed emerging themes through electronic memos. Analysis was complete after confirmation of each code and narrated themes accounted for all coded data segments and relationships between code categories.

Findings

Thematic analysis illuminated close alignment between students' literacy goals, their perceptions of course activities, and SLOs. Although students demonstrated some metacognitive awareness of their literacy strategy use, this was limited to reading strategies. Our findings are organized by themes identified for each research question and for each theme we present the most frequent instances we coded or articulated by students. Additionally, there was an absence of students referring to developing their racial literacy or increasing their linguistic dexterity, within the raciolinguistic justice-oriented curriculum, due to the focus of our data collection protocols.

Student-Articulated Literacy Goals

Most students held clear writing and reading goals for their enrollment in developmental literacy classes. Students mentioned their goals multiple times across focus groups and interviews. Even when expressing goals in general terms, students could articulate reading and writing strategies that supported their goal attainment. For example, Lawrence's goal was to "be more engaged with the readings" which he described as "looking at questions before so like annotating helps me because I'm taking note of what I'm reading. So, when I'm done reading, I understand what the whole reading was about." Lawrence described annotations as "underlining things I think are important, like I read before and after, see if it helps to connect to it to find the main idea." As such, even seemingly generic student goals, such as "[improving] my grammar" (Vivian) were often attained or discussed in relation to specific literacy strategies. Students' discussion of their goals illustrated their efforts to direct and monitor their work toward the task-related goals, such as understanding the reading through its main idea (Borkowski et al., 2000). Student-articulated writing goals most frequently included General Improvement and Apply Rhetorical Strategies/Clarify Points (Table 2). For example, "Understanding the structure of writing" (Laney) exemplified Apply Rhetorical Strategies/Clarify Points which focused on students' development of their writing structure and organization.

Table 2
Dominant Student Articulated Writing Goals

Writing goal	Description	Example quote	Frequency, *n*
General improvement	Become more confident and proficient in writing academic essays in general without a specific concrete literacy goal	"Become a better writer" (Tucker)	15
Apply rhetorical strategies/ clarify the point	Improve structure or organization of ideas while composing	"Understanding the structure of writing" (Laney)	13
Expanding on thoughts more in writing	Increase how much they wrote	"Expanding on thoughts more so I can stretch my papers" (Paris)	12
Adhere to academic writing conventions/ write in MLA	Recognize and apply academic writing and formatting (e.g., word choice, tone, and grammar)	"I do struggle with grammar a lot, being bilingual.... It's hard to transition from grammar in Spanish and grammar in English… I hope to get better at that." (Laney)	11
Focusing on the writing task	Stay focused on the writing assignment topic and self-regulation in their writing	"Focus on what I'm writing and what I'm focusing on for the assignment" (Simone)	6

The most common student-articulated reading goal was Use Reading Strategies (Table 3): "Markdown where to stop, mark down what you're thinking here, 'Why are you reading it?' You're not just doing this just to pass a class. You're doing this for something more" (Jake). The notion of "something more" alluded to Jake's self-system, or the experiences and aspirations that make him unique (Borkowski et al., 2000), and Jake saw his purpose and process for annotating as relevant to his broader college goals. He shared how he achieved his broader college goals "using the material that we've used in class in other classes, especially with readings and sociology." Further, Jake's explanation illustrated the goal Focus on the Reading Task. In asking himself "Why are you reading it?", Jake demonstrated his awareness and monitoring of the cognitive processes for achieving his goals, a central aspect of his domain-specific metacognition (Moktahri et al., 2018).

Table 3
Dominant Student Articulated Reading Goals

Reading goal	Description	Example quote	Frequency, *n*
Use reading strategies	Use annotations (Support reading strategies), identifying purpose (Global reading strategy), and rereading/ adjusting their reading (Problem-Solving reading strategies)	"Taking some notes off to the side to each paragraph that I'm reading to help me go back and help me remember what I am reading" (Simone)	41
Understanding	Comprehend different genres of readings, understand what the main idea is, often a response for not having a specific reading goal	"To increase my understanding and then to increase my comprehension" (Cesar)	28
Focus on the reading task	Close attention to the skill and processes of reading the text including strategy use more than just the meaning or understanding of the text	"Better assess ourselves when it comes to like reading passages and articles, maybe helping us with developing our person" (Mateo)	13
Vocabulary development	Learn strategies to define unknown words or learn context clues to understand without stopping to look it up	"I think my reading goal was to start reading more and understanding different definitions of words" (José)	12
Identify the relevance/ quality of ideas	Identify the main idea while reading the text or choosing which points in the text are most relevant for their understanding of the text.	"Another one [goal] is that I always circle the information... because maybe it is important at the end of the readings" (Lili)	7
Read more	Develop an enjoyment or habit of reading more by overcoming/ understanding their difficulties with reading.	"My goal was just to be able to have a, I wouldn't say love, but like a thing for reading more" (Claire)	6

Alignment of Student-Articulated Goals and Student Learning Outcomes

Students often held generalized reading and writing goals, which they elaborated on in ways that aligned with course SLOs (Table 4). Student goal descriptions did not contain the concise language of learning outcomes; however, through deductive analysis, we matched repeated meanings across data sets to align course SLOs with students' literacy goals. Alignment between SLOs Use Reading Strategies and Metacognitive Growth/Awareness and the corresponding student-articulated reading goal Active Reading Strategies is visible in Jake's explanation of his annotations: "'What's the community that Caesar Chavez belongs in? What are his values?' I mean a lot of the pages are just like taking notes to the side, and it was exactly like what I wanted to work on: putting notes to the side." Many students similarly held literacy goals closely aligned with active and metacognitive reading focused SLOs. In addition to Jake's support strategies (annotating), he applied global ("asking questions and making predictions") and problem-solving strategies ("checking understanding of reading," reviewing notes). All but one student-articulated goal aligned with a course SLO. The exception, Read More, was the least commonly articulated goal and referred to fostering an enjoyment for reading.

Table 4

Student Literacy Goal and Course SLO Alignment

Student goal	Aligned student learning outcome (SLO)	Frequency, *n*	
		Goal	SLO
Use reading strategies	Active reading strategies	41	417
Understanding	Identify relevance/quality of ideas in a text while composing	28	81
Understanding	Inference/evaluate validity in text	28	45
Become a better writer	Use drafting and revision strategies in composition	15	46
Focus on the reading task	Metacognitive growth/awareness	13	136
Apply rhetorical strategies (Clarify the point)	Use rhetorical strategies in composition	13	63
Vocabulary development	Vocabulary use in reading	12	19
Expand on thoughts more in writing	Write with multiple sources	12	15
Adhere to academic conventions (Write in MLA)	Adhere to academic English conventions	11	23
Focus on the writing task	Metacognitive growth/awareness in composition	6	18
Read more	-	6	-
Read to improve writing	Recognize rhetorical structures in readings	4	37

Student-Articulated Goal and Literacy Practice Alignment

Students' literacy practice descriptions and assignment explanations illuminated substantial alignment with their literacy goals (Table 5). Unsurprisingly, given the instructional emphasis on metacognitive reading, Active Reading and Understanding demonstrated the greatest goal-to-practice alignment. Within academic reading, students' implementation of their reading strategies was both intentional and highly targeted. For instance, "understand[ing] what I'm reading because sometimes I get off focused a lot" (Crystal) was accomplished by "writing down little notes or paraphrasing, help[ing] me understand the reading." Similarly, Tommy described "being more engaged with the readings" which was supported by his practice: "Annotating helps me because I'm taking note of what I'm reading. So, when I'm done reading, I understand what the whole reading was about." His description illuminated his metacognition, "Underlining things I think are important in [what] I read before and after [to] see if it helps to connect to it." Tommy also articulated his purpose for the reading strategy of annotation, showing the metacognitive act of reflecting on his success rates. Tommy's metacognitive reflection on his reading strategies aligns with the articulated goal-SLOs of Metacognitive Growth/Awareness. Tommy's metacognitive reflection on reading strategies aligns with the SLOs and shows that he is a self-regulated learner. However, students discussed fewer examples of their metacognitive reflection within the domain of writing.

Table 5

Alignment of Student Goals and Literacy Practices

Student goal	Example quote demonstrating literacy practice of goal	Frequency, *n*	
		Goal	Practice
Active reading	"When I read throughout the essay or any article, I always ask a question to myself." (Lili)	41	18
Understanding	"I learned how to dive deeper into an article and understand what they're actually trying to say with the word instead of just the superficial side." (José)	38	13
Become a better writer (general improvement)	"I'm focused on having better—like making the point come across." (Laney)	15	2
Focus on reading task	"Mark down where to stop, mark down what you're thinking here, 'Why are you reading it?' You're not just doing this just to pass a class. You're doing this for something more." (Jake)	13	3
Rhetorical strategies	"I was thinking about the word choices that I would pick, as I was writing." (Laney)	13	3
Expand on thoughts more in writing	"When we get into small groups and we start talking and some people can expand better than others. Like they be giving each other ideas about how you can do this better." (Paris)	12	1
Vocabulary development	"I'm finding keywords and using context clues to find out what the word means." (José)	12	4
Adhere to academic conventions	"While writing an assignment, I mean the teacher would want you to answer formally instead of like the way you speak every day." (Tucker)	11	5
Focus on writing task	"Simply by reading and reading things from a group of diverse authors, is definitely like the first thing that helped me kind of share my community. And since my writing goals were to include more of myself, it was definitely easier for me to do that... I think that's definitely been the biggest step into how my goal is now and how I've succeeded with my goal." (Santiago)	6	1
Read more	"I'm more of a reader now I actually wanted to read about these other things." (Adam)	6	2
Read to improve writing	-	4	-

In general, frequency counts in Table 5 are much lower than articulated goal-SLO alignment since students' goals did not guarantee their intentional strategy application or mastery. We suspect that classroom or study session observations would have increased literacy practice counts: our protocols elicited students' perceptions of course strategies' (ir)relevance to their goal achievement, not the frequency with which they engaged in strategy application.

Students' Metacognition Related to Strategy Use

Students in this study demonstrated the greatest metacognitive awareness for active reading strategies (Table 5). Students' metacognition was most frequently connected to their reading strategy use (Table 6). Students were best able to articulate the rationale for applying reading strategies to meet their literacy goals. SRL abilities are influenced by learners' domain-specific metacognitive knowledge (i.e., understanding/articulating why they apply strategies to meet their literacy goals; Boekaerts, 1995).

Table 6

Metacognitive Awareness of Strategy Application for Goal Achievement

Student goal	Example quote	Frequency, *n*
Support reading strategies	"Circling [unknown words because]… I'm like, 'Okay, don't really know how this fits into it.' Reread the sentence again. See how it fits, and then underlining to emphasize important things that I should probably remember." (Jake)	66
Global reading strategies	"The visualization, the reading aloud and stuff help me better understand what they [the author] wrote because it's them, it's not me, it could be a part that I've never gone through." (Lonnie)	59
Problem-solving reading strategies	"Another strategy I use is to always guess sometimes whenever I read especially like vocabulary. I'll be like, 'Okay, let me just guess this word,' and if I get it wrong, it's alright. I could get it a second time and think through it more." (Lili)	32
Using drafting and revision writing strategies	"I already knew what it was going to be about, so I just gave [my professor] how I actually think so that I can actually get feedback from that to better it, and to make it more professional or a better way for others to understand." (Natali)	11
Metacognitive growth/awareness in writing skills application	"There are types of essays because I wanted her to grade me like stronger on like structure, because, you can have a good essay… but even though you got like all this stuff, and your essay sounds good, but you can't structure well it's just like you turned in the bad essay." (Derreck)	10
Rhetorical writing strategies	"I can see where [the instructor] is coming from [with his written feedback], and I can go through this and be like 'Okay, maybe [he] didn't call this out, but I know I could have done better on this [repetition]." (Lili)	6
Academic writing conventions	"I was also put in the ESL classes for a very long time due to the double language barrier [as a child]…. So, I would express my way and those essays of me like how I would speak at home versus hide [my home language variety in academic papers because] we're in the professional world or school." (Lonnie)	5

We suspect that this reading-metacognition connection was motivated by students' completion of the Metacognitive Assessment of Reading Strategies Inventory (Mokhtari & Reichard, 2002) which exposed students to reading strategies by name. Students were much less likely to articulate a rationale for writing strategies/processes despite a course SLO Metacognitive Awareness in Writing and reflection assignments in which students responded to instructor feedback on each of the class's three formal papers by explaining their language and rhetorical purposes and their goals for completing assignments. However, our review of assignment handouts uncovered that metacognitive awareness of the writing process was not mentioned in any assignment handouts—unlike frequent references to metacognitive reading processes, course writing assignments did not explicitly link metacognition to writing. This absence may have limited students' awareness of and references to metacognitive writing strategies. Similarly, another absence was illuminated during our data analysis.

A Noticeable Absence

Finally, we conclude our findings by pointing to students' nearly non-existent references to developing their ability to read or write about race or to increase their linguistic dexterity. Due to our focus on students' literacy goals (rather than their awareness of or agreement with the appropriateness of the course theme), our data collection protocols did not explicitly ask students about their understanding of the course theme or interest in developing their racial literacy skills. However, given the course's raciolinguistic justice orientation, we were surprised by students' limited discussion of how they were encouraged in the class to read, write, or think critically about race or racism. Although further exploration of this phenomenon was beyond the scope of our study's exploration of students' literacy goals, we posit that students did not see the course curricular focus as shaping their literacy goals. Instead, it might have been that students viewed the types of texts they read and produced as irrelevant to their ability to achieve their literacy goals. This perspective may have been inadvertently supported by racial literacy's absence in the course SLOs to which students' goals were aligned.

Students' goals closely align with SLOs and perceptions of class activities as supporting their literacy goals despite students' lack of engagement with the course focus on racial literacy development. Through discussion of their coursework, students demonstrated domain-specific metacognitive knowledge about how particular strategies supported their goal attainment. Ultimately, students were intentional in their goal-setting and utilizing the course to achieve these goals.

Discussion

We begin by acknowledging the delimitations of the study and then put our findings in conversation with the literature.

Delimitations

To center student perceptions of the alignment between their developmental literacy class and their literacy goals, we did not solicit students' understandings of the connections between SRL and raciolinguistic justice. As noted previously, the raciolinguistic justice orientation, while influential in the course's overall framework, did not impact the course's SLOs, and as such was excluded from the present study, including research questions and focus group/interview protocols. However, given students' limited references to the connections between race and language, future studies are needed to examine students' perceptions of raciolinguistic justice-oriented teaching approaches and their relevance to students' literacy goals and development, particularly since students may be hesitant to discuss race or racism in class due to previous negative experiences (Kernahan, 2019; Wing Sue, 2015). Further, although rich across the multiple student interviews, our data were also

limited to a relatively brief period in the semester. Future studies should examine how students' understanding of their literacy goals develops throughout their college career as well as the effects of different instructional contexts on goal development, monitoring, and attainment. Despite these delimitations, our findings confirm the importance of goal setting in students' engagement with course materials in developmental literacy contexts. Specifically, the findings illuminate the skillful ways that students can apply metacognitive strategies to reflect upon their coursework and their literacy goals. However, students need additional support to transfer their metacognitive and self-regulatory skills to meet the linguistic dexterity and critical race consciousness goals of a raciolinguistic justice curriculum, particularly when those goals are conveyed through course readings and assignments but not SLOs.

Goals Set and Aligned

As articulated in asset-based pedagogies (Gay, 2018; Paris & Alim, 2014) and theories of SRL (Boekaerts, 1995; Weinstein et al., 2011; Zimmerman & Schunk, 2011), students hold clear goals and purposes for engaging in the developmental literacy class. This study supports previous findings that students can be empowered to take control of their learning by setting and monitoring goals (El Hindi, 1997; Maftoon & Tasnimi, 2014; Talwar et al., 2023). In the present study, students' goals are closely aligned with course SLOs. Although we are unaware of additional scholarship examining how SLOs shape students' perceptions of the learning environment or their literacy goal setting, the observed substantial overlap between SLOs and students' articulated goals suggests the importance of the learning environment on these students' efforts to achieve and reflect on their literacy goals (Dincer et al., 2019).

Additionally, students' literacy goals were often reflected in their descriptions of class assignments and activities. Students' ability to connect their literacy goals to coursework contributes to their view of the learning situation as motivationally supportive and encourages autonomous engagement (Reeve, 2013). This connection was evident in students' detailed descriptions of their processes for completing assignments, such as Lawrence's annotations to keep engaged in the reading and Laney's description of how the class would "go over [the readings] and know what we're reading, and why it's important to read that as well." Such connections validated students' goals, thereby contributing to their sense of self-efficacy about their goal achievement (Bandura & Wood, 1989). Exploring students' self-efficacy was beyond the scope of the present study. However, scholars have documented self-efficacy growth in developmental literacy contexts (Wachholz & Etheridge, 1996; Wernerbach et al., 2014).

Students' Literacy Goals and Metacognition

Students' explicit articulation of their goals and coursework illustrated their metacognition and self-regulation in service to their literacy goals. Self-regulation requires domain-specific metacognitive knowledge (Burke & Mancuso, 2012; Lawlor, 2012), which students demonstrated in their discussion of how and why they engaged in specific reading and writing tasks, such as, in an aforementioned student response, Crystal's choice to write paraphrased annotations because she tended to lose focus. Significantly, however, students were substantially less likely to identify writing goals or to discuss their metacognitive growth as it related to their writing skills application. These findings combined with students' limited exposure to metacognitive writing instruction suggested that the students in this study possessed less domain-specific metacognitive knowledge related to writing which they could apply to setting or evaluating their goals.

Students' Literacy Goals in Student-Asset-Centered Curriculum: An Incomplete Picture

Finally, although beyond the original scope of our research questions, our findings

uncovered a puzzling disconnect between the course's goals of developing students' linguistic dexterity (a writing goal of sorts) and their critical consciousness on the one hand and students' own stated literacy goals on the other. At first, the research team assumed that the course's raciolinguistic justice curricular focus (as evident in discussions, assigned texts, and assignments) would be echoed in students' literacy goals since this focus featured prominently in course readings and assignments—many of which students described favorably during focus groups and interviews. Essentially, we assumed that students would recognize how a raciolinguistic justice approach would necessarily also connect to and build upon their sense of self and their domain-specific metacognitive knowledge. However, only two of the 37 participating students made such a connection. One of these students, Mateo shared his writing goal "to include more of myself," and he explained how "reading things from a group of diverse authors... [was] the first thing that helped me share my community." Similarly, another student, Paris felt an affinity for assigned readings:

"Those people in the stories, all they want to do is belong where they were at. We can relate to things like that, and when we read those stories paragraph by paragraph and made annotations about them, they really made us look at the world and have a different outlook on what was going on and what was happening. Also, how it relates back to class, too, and what we're going to be writing about. They made it easier for us."

However, none of the students discussed in-class connections between the raciolinguistic justice-themed course content and course SLOs focused on metacognitive development. Several class activities sought to connect students' awareness of their developing linguistic dexterity to their metacognitive awareness and SRL skills. For example, students practiced Inoue's (2020) antiracist reading process which includes the metacognitive task of examining the origins of readers' assumptions, to view Kimberlé Crenshaw's (2016) TED Talk on intersectionality. This reading (and its subsequent discussion) was just one instance of how class activities sought to connect raciolinguistic justice-oriented texts and students' ability to regulate their learning. Paper reflections were another common activity in the class which created space for students to reflect on how their raciolinguistic identities impacted their task orientation (Borkowski et al., 2000) and self-monitoring (i.e., ability to rationalize and articulate their language choices when code-meshing or shifting between multiple registers). After each formal written paper, students wrote reflections that responded to faculty feedback, identifying, and explaining their various language choices related to their goals for the assignment. However, none of the interviewed students referred to these activities.

As we reconsidered why students' discussion of course assignments did not better emphasize the connection between their literacy goals and the course's raciolinguistic justice approach, we acknowledge that much of the scholarship advocating for racial literacy instruction is predicated upon the belief that students to develop these racial literacy skills without exploring students' desire to develop such skills or an explication of students' own goals for their literacy development (Grayson, 2017; Inoue, 2020; Sealy Ruiz, 2017). Such a perspective may predispose us as instructors to begin from a place of "teacher knows best" which is antithetical to a raciolinguistic justice orientation for teaching. In reflecting on our findings, we commit to reconsidering how we invite students to explore the aims of racial literacy as they relate to students' articulations of their literacy goals.

Further, we concluded that our exploration of students' goals as representative of their self-systems is incomplete without incorporating their epistemological beliefs about learning, and the purposes of reading and writing (Nist & Holschuh, 2005). Indeed, despite assigned readings and discussions

focused on how raciolinguistic identity shapes authors' messages and readers' understanding of the text, the raciolinguistic justice framework was not reflected in course SLOs due to the political environment of the state in which data was collected. As such, students may not have perceived the raciolinguistic justice focus of the class as students are frequently socialized to view the classroom as a race-neutral space (De los Ríos et al., 2015). We conclude that a raciolinguistic justice approach to selecting texts or framing discussions may be insufficient to encourage incorporating a racial literacy perspective into students' literacy goals. Additional research is needed to examine instructional strategies in developmental literacy courses to foster students' development of and recognition of their linguistic dexterity and racial literacy. Specifically, we recall ways we could better center this within our instruction of developmental literacy courses. As teacher-scholar-activists, the work of reflecting on our practice for our praxis is never done as it is constantly evolving from new information and experiences.

Despite our concerns that the course had a limited impact on developing students' linguistic dexterity and critical consciousness, the data illustrated students' perceptions of the course's curriculum and instruction as effective for creating the conditions for articulating literacy goals and metacognitively applying and assessing strategies to achieve these goals. As such, the study contributes to the existing literature on SRL in developmental education contexts (Weinstein & Acee, 2013; Weinstein et al., 2011).

Conclusions

With an SRL framework (Boekharts, 1995), this study examined students' perceptions of the alignment between their literacy goals and literacy student learning outcomes, and their metacognitive awareness of how they applied literacy strategies in their developmental literacy course. Our thematic analysis (Braun & Clarke, 2019) illuminated the strong connections students perceived between their literacy goals and SLOs as well as their understanding of class activities as supporting their goal attainment. Our study explored how students in a developmental literacy course view their learning. It focuses on what students want to achieve (their literacy goals), how those goals align with the course objectives (Student Learning Outcomes) and the activities they do in class, and finally, how aware students are of their learning strategies (metacognitive awareness) in achieving their goals. Specifically, students articulated literacy goals specific to their literacy goals, and course SLOs aligned with students' articulated goals. Furthermore, students demonstrated their self-regulated learning through their descriptions of how they understood how and what they did to attain those goals. Students' reading-oriented domain-specific metacognitive knowledge was more highly developed than that of their writing-oriented knowledge due to the curricular focus of the course.

This study provides implications for broadening traditional developmental literacy instruction for whole-student development for success in college. SRL is often considered the exclusive domain of study-skills courses, leaving minimal explorations of its applications in content courses. However, SRL instruction in developmental contexts has been shown to foster metacognitive reflection and self-monitoring toward goal achievement. The present findings indicate that developmental literacy courses are an ideal context for teaching students SRL skills to realize the student-centered potential of the field's assets-based pedagogies that center student agency and autonomy (Shapiro et al., 2016).

Future studies are needed to expand upon these findings to examine instructional and other classroom community factors that facilitate students' understanding of literacy instruction and activities as well as their ability to connect these to their own goals for being in the classroom. Such studies could take pre- and post-measurements of students' SRL. Additional explorations are also needed to

examine whether and how students transfer their self-regulation and literacy strategies to other courses and disciplines. Jake's description of applying metacognitive reading strategies in other classes suggests the transferability of these strategies; however, additional studies are needed to examine the alignment between students' literacy goals and other courses, particularly courses that do not privilege literacy instruction.

Finally, our findings also lead us to hypothesize about the utility of a raciolinguistically justice curriculum for fostering students' domain-specific metacognitive awareness in service of their academic literacy goals. Although students may have had limited awareness of the implicit racial literacy aims of their course, they were highly successful at articulating how the course supported their literacy goal attainment, suggesting the need for future research exploring the potential for SRL instruction to support students' developing awareness of their language use and goals in classrooms promoting critical consciousness.

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Appendix A

Focus Group Interview Protocol

The purpose of this interview is to understand your reading and writing goals, and how you use English in different ways to achieve different purposes. We want to understand what types of reading and writing instruction help you think, read, and write in college. Many English and reading teachers want to support students sharing their identities but need help. Students like you have important insight into how students want to learn, read, and write in college and what kinds of teaching or activities best help students to share their identities and accomplish their reading and writing goals. So, we really want to hear from you what you've done in class or wish you to do in class to help you use your language skills to read and communicate effectively. This interview will last about 60 minutes, and I want to make sure that you know that the transcript that will be coded will not have any of your information. So, I'm going to be using a fake name to protect your privacy, do you have any questions?

1. Have you read the form and decided that you'll participate in the project described above?
2. Do you agree to participate in the study understanding the risks, and your right to withdraw at any time?
3. What types of reading and writing instruction help you think read and write in order to communicate your message to your intended audience?
4. How do you make choices about the different ways you can use English in college?
5. Have you experienced any challenges using formal or informal English or other languages, and what did you do to overcome these challenges?
6. What have you done in class, or what do you wish to do in class to help you use your language skills to read and communicate effectively?
7. What reading and writing goals did you set for yourself at the beginning of the semester?

Appendix B

Interview Protocol

The investigator will begin the recording to collect consent.

DOCUMENTATION OF CONSENT

1. Have you read this form and decided that you will participate in the project described above?
2. Do you agree to participate in the study, understanding the risks and your right to withdraw at any time?
3. The interview will last about 60-90 minutes and we will audiotape the discussion to make sure that it is recorded accurately. The transcript will be coded with pseudonyms, or fake names, to protect your privacy. Do you have any questions before we begin?

Part I: Making Choices about Your Reading

"In many of the focus groups, students shared how they use reading strategies to understand or achieve their reading goals."

1. What were your reading goals when you started this class? Please begin by describing your overall experience with the reading for me.
2. How, if at all, did you expect doing this reading would impact your grade? What parts of the reading seemed easy? Difficult?
3. Describe what you did to read this reading. How did you decide what to do?
4. Your class has included different strategies for reading. What reading strategies do you recall have been introduced in class?
5. In the focus groups, students talked about how they see class readings connecting to the authors' and their own identities and purposes for reading and writing. How, if at all, do you use reading strategies like [stated strategy] to help you understand the course theme? How have you used reading strategies to help you achieve your reading goals?
6. Can you show me an example of that in the text you brought to our interview today?

Part II: Making Choices about Your Use of Language in Your Writing

"Thank you for your response thus far. Now we are going to change directions slightly to talk about how you choose to use language in your writing for college."

1. Do you feel like you have the freedom in your class to make choices about the way that you use language to convey your message or share your identity through your writing?
2. How does having this freedom in your writing influence how you share your identity with your readers?
3. Tell me about how having the freedom to make choices about language influences your ability to achieve your writing goals.

"Thank you for your time so far today. Before we move on to the last part of this interview,"

4. what else from the class has influenced the way you feel about how your use of English to present different parts of your identity or to achieve your goals?

Part III: Reflecting on the Effectiveness of Your Language Choices

"Again, thanks so much for your time so far. We're going to shift gears one more time now to look at one final assignment. Together, we'll go over a paper that you submitted for class. You will perform a 'think aloud' strategy as you read through your paper and your instructor's feedback. Similarly, you make annotations or have thoughts while you read silently doing a 'think aloud' strategy means that you share your thoughts verbally as you read something. Please try to say everything that goes through your mind and try to be as detailed as possible with what you are thinking about while you are reading. I may also ask you at certain points during the think-aloud to tell me more about what you are thinking."

1. Please begin by describing the assignment.
2. Please describe your expectations for this assignment. What kinds of things did you expect would affect your grade on this assignment?
3. Before receiving your grade, how confident did you feel about your understanding of this assignment?
4. What was your purpose for completing this assignment?
5. As we talked about in focus groups, authors can vary their language to emphasize different parts of their identity or to convey their purpose for writing. What choices did you make about your language to achieve your purpose for writing this paper? How effective were you at achieving your purpose?
6. Walk me through how you read or perceive an instructor's feedback on a graded assignment.
7. Using your own words, please describe the experience of reading through your instructor's feedback.
8. What was the most useful piece of feedback that your instructor gave on your assignment?
9. What was the least useful piece of feedback that your instructor gave you on your assignment?

"Thank you for your time and for sharing your experiences in and with your course."

10. Before we conclude this interview, is there any else you would like to share about reading and writing experiences in college or with the course?

Transformed Literacy Experiences: Cultivating a Relationship with Reading

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As a developmental reading educator, I spend much of my time trying to understand my students' previous reading experiences to build upon those experiences as I push them to be more proficient and independent readers. Recently, I have noticed that for some students these prior reading experiences have become challenging to discuss because they are insignificant and often feel nonexistent. When I ask students to tell me their favorite book, I get multiple responses such as "I don't read enough to know," "I don't really have a favorite book," and "I haven't really read a book in a long time." Knowing the significance of reading on overall academic success, these responses are most concerning to me, and I have spent much time trying to figure out why these types of responses are more prevalent now than ever before and how educators can encourage and motivate more students to read for pleasure.

During the sudden and unexpected move to online learning during the Covid pandemic, all aspects of school drastically changed. As students were forced to remain home and parents became unlicensed teachers, many focused on surviving over thriving. Fortunately, the majority of these changes were short-term, however, there have been some long term and lasting effects of the nationwide school closures. As schools closed, students relied on their home resources which exacerbated equity and equality issues already pronounced within our school systems. The National Student Clearinghouse (2022) reports that after the first full year of disrupted schooling, high school graduation rates declined in at least 20 states. In addition, student performance on the ACT declined and, only 22% of the students who took the ACT tests in 2022 were considered prepared for college based on their overall benchmark scores. That same year, only 41% of high school students who took the ACT met the college readiness benchmark for reading (ACT, 2022). The average ACT score for the high school class of 2022 declined to the lowest level in more than 30 years. Unfortunately, these low scores are not surprising after the interruption of traditional schooling experiences during the Covid pandemic. Although many colleges and universities have moved away from the requirement of ACT scores for admission and placement, these scores still highlight the academic under-preparation of current students and can be strong predictors of college performance.

As educators, we continue to look for ways to close achievement gaps and give students the skills necessary for academic

success. Leisure reading or reading for pleasure is often associated with the development of necessary academic and cognitive skills. However, during the last two decades there has been much concern about the decline in students' enjoyment of reading and overall leisure reading experiences (e.g., National Center for Educational Statistics, 2013; Schleicher, 2018). This concern has only intensified, and many blame the inequalities in access to quality reading material both at home and in schools (e.g., First Book, 2021) and the increase in technology usage (Loh & Son, 2022; Twenge et al., 2019). With the sudden move to online schooling during the pandemic, many students had to rely on only the materials they had access to within their homes, including print and digital materials. With an increase in technology usage and limited access to resources there is no doubt students' educational experiences were truncated and transformed.

Importance of Leisure Reading

Amount of Independent Reading

Discussion about the benefits of leisure reading has a long history. Early research found reading achievement could be predicted by the amount of independent reading (e.g., Anderson, Wilson, & Fielding, 1988), motivation (e.g., Csikszentmihalyi, 2009) and strategy use (e.g., Guthrie, Schafer, Wang, & Afflerbach, 1995). It was determined that there are positive correlations between students who spend more time independently reading and high achievement and growth in reading comprehension (e.g., Cipielewski & Stanovich, 1992; Stanovich, 1986). More recent studies have corroborated these earlier findings. In their meta-analysis that looked at the print exposure of preschoolers to college and university students, Mol & Bus (2011) concluded that there was a correlation between print exposure and reading skills. That is, students who spent more time reading and who were exposed to print developed stronger reading skills.

Today, leisure reading is in competition with a myriad of events and extracurricular activities for school and adult-aged college students. Adolescents spend on average eight hours a week on extracurricular activities (Tjaden, et al., 2019). When that is added to the amount of time spent in school and doing homework there isn't much time for socializing, working or other activities, including reading. These behavior patterns continue with adult-age college students who have several obligations beyond the academic and social scope. In fact, a recent study looked at improving equity and inclusion for students at an open-access, two-year college, and found that students discussed economic insecurity, time management, and transportation problems as the biggest barriers to their academic success (Benander, et al., 2022). This highlights the complexity of the lives of current students and the competing nature of priorities.

Motivation

When it comes to reading for pleasure, much research focuses on the importance of intrinsic and extrinsic motivation and how both play an important role in student approaches to reading. Intrinsic motivation involves the completion of an activity for inherent satisfaction. When discussing the intrinsic motivation surrounding leisure reading, researchers have found that this includes "three internal constructs of curiosity, involvement, and preference for challenge" (Wang & Guthrie, 2004, p. 165). Leisure reading has been found to be more intrinsically motivating for students (Cox & Guthrie, 2001) with studies showing a positive relationship between a students' motivation to read and the amount of print exposure (De Naeghel, et al., 2012; Schafner, et al., 2013) and the frequency of pleasure reading (Guthrie et al., 1999; Wigfield & Guthrie, 1997).

Extrinsic motivation is driven by demands, rewards and expected consequences. Wang and Guthrie (2004) proposed five external constructs of extrinsic motivation

including "recognition, grades, social, competition, and compliance" (p. 165). Students who read for the sole purpose of such external demands and controls are less likely to read for pleasure and often experience lower levels of overall text comprehension. Whereas intrinsic motivation has a positive relationship with reading skills and comprehension, extrinsic motivation may be negatively associated with comprehension (Troyer et al, 2018) since students are more motivated to complete a reading assignment rather than understand the text. Such students use more surface level reading skills as opposed to deep reading and critical thinking.

Strategy Use

Similarly, students who are considered strategic with a solid grasp of reading strategy knowledge and use are more likely to participate in leisure reading activities and have increased reading skills. Conversely, students who struggle with strategies associated with comprehension are less likely to engage in meaningful leisure reading activities (Cox & Guthrie, 2001). Although none of the prior research is surprising, missing from the research is a focus on the students who spend less time independently reading, have low motivation for reading and struggle as strategic readers. These are the students who often struggle in school and fall behind. Understanding why students choose to read for pleasure, or more importantly, why students don't read for pleasure, is necessary especially considering the recent changes to education due to the pandemic. Providing students with more structured reading experiences that can transform the way they think about themselves as readers as well as topics and ideas happening around them, may increase their likelihood to become more independent readers.

Transformed Reading Experiences

The need to increase postsecondary students' interest and access to purposeful and meaningful literacy experiences is at an all-time high. Based on dwindling academic performance and an increase in extracurricular activities, technology use and personal obligations this need has never been more challenging yet more dire. Current students are reading less, but the importance of reading, critical thinking, synthesis and application remain intact and continue to play a crucial role in the desire for academic success.

To this point, I recently made pedagogical changes to a college reading course which emphasizes the development of reading comprehension skills so students can effectively handle the reading demands of college courses and enhance their overall academic performance across the curriculum. Changes included creating more opportunities for students to experience the process of transformation—or a thinking adjustment—when reading a variety of texts. Transformed thinking involves the combination of processing information we already have with information we gain when reading. I wanted students to experience the influence of reading on becoming more intentional, critical and receptive while also gaining a new understanding of themselves as students and active participants in their learning and within their personal and academic experiences.

Although I use a variety of texts within this course, I am focusing this reflection on an experience within my classroom where we used a fictional text. With fiction and other genres, such as memoir, the reader gets to experience situations and life events without living through them. We are often transformed—or changed—and our thinking about a particular person, event, situation and so forth can be adjusted. This is an easy concept for students to grasp since they have similar experiences when they watch movies, play video games and listen to music—activities they often spend more time on than reading. I focused on works of fiction because I wanted to help instill a love of reading that I know, based on personal reflection papers written at the beginning of the semester, many of my students had when younger. As previously mentioned, students

often have a hard time recalling or naming a favorite novel, but I have found they can easily discuss their love of reading from their early childhood or elementary years. The years before their lives got busier with extracurricular activities or consumed with technology.

Although much research supports the idea of allowing students to self-select reading materials to increase engagement and motivation (e.g., Flink, 2017; Paulson, 2006), I intentionally and purposefully assigned a fictional novel but used instructional approaches and designed activities and assignments with principles that support engagement and motivation (e.g., Kim, et al., 2017). For example, throughout the semester long course students engaged in collaborative activities, activities that promoted agency and relevancy, and had multiple opportunities for expanding cognitive processes.

I decided to introduce my students to a work of fiction that had recently transformed me as a reader. While reading Demon Copperhead by Barbara Kingsolver I experienced what O'Brien (2008) refers to as epistemological, ontological, and ideological transformations. In other words, reading this novel provided me with knowledge, perspective, and a sense of self-awareness that shifted my thoughts and identity. I wanted to share this experience with my students and provide the opportunity for them to transform themselves as students through text. Additionally, assigning this reading experience in a scaffolded environment could help foster consistent reading patterns and reading stamina.

Demon Copperhead was the perfect impetus for introducing my students to the critical and active reading skills that are necessary for their future postsecondary success. Understanding the importance of both intrinsic and extrinsic motivation on reading for pleasure and for completing assigned readings, I incorporated activities that created a sense of curiosity and assignments that encouraged deep thinking. Demon Copperhead provided opportunities for gaining valuable background knowledge about the Appalachian region, the opioid epidemic, and the foster care system. Students could make connections between themselves, additional texts and current events happening in their communities or throughout the world. Students were challenged to look at different perspectives and how these perspectives call to question different identities and opportunities for agency.

Using O'Brien's (2008) transformative framework, the reading and discussion of this novel focused on opportunities for increased knowledge, diversity in perspective and worldview and self-perception. In other words, students were provided with the opportunity to transform as they experienced a change in their identity as a reader. In a culminating assignment, which asked students to reflect on their experience of reading, discussing and experiencing Demon Copperhead, epistemological, ontological, and ideological transformations were present. For example, one student shared that

This novel was so inspirational to me. It helped me understand the world around me and the struggles that everyone goes through. How different it is for everyone, yet you should always stay positive… I have a better understanding of what the people around me could be going through as well as the emotion behind it. This novel made me more emphatic. Another student shared their transformative process while gaining perspective,

Reading this novel made me reflect on how important it is to be there for someone. I had friends that I had known in high school who eventually had drug problems and saw the struggles that they went through with their addiction. How they wanted to stop, wanted to get clean but felt like they were hopeless being sober. The way that Damon explained towards the end of the novel how he was feeling I related to one of my good friends today and what he went through to get clean. The way Damon explained how he would stop if he could but could not find it in him to stop. He felt hopeless. The book put into perspective

what my friend felt at some of the lowest moments of his life.

Students also reflected on how this novel transformed their self-perception. This book felt like a mirror of my life. Me and Demon have followed very similar paths. It is a bit creepy, but it was the reason why I kept reading…I could feel his pain as if it were my own and empathize with him. I could see how he grew as a person throughout the book just as I grew up and matured.

In addition, this opportunity provided transformed thinking about reading, the experience of reading and what one can gain from reading. One student shared,

"This is the first fictional book that I have read outside of school. Reading this book has changed my perspective on what I think about this genre. With the personal connections that I had with the text, it had made it easier to follow along, and not lose interest. I always showed interest in non-fiction because the facts are there. I was surprised by how accurate the author was in describing the opioid pandemic.

Similarly, another student explained,

This is the first novel that I have read in an extraordinarily long time. The last time I read a true novel was in high school and I do not think I even completed it. This was a very daunting task for me at the beginning of the semester I am glad that I stuck with it because it was an amazing book. It was hard to read at first, but the end was very wholesome. It has sparked a new interest in reading that I never really thought I would find normally it would take four to five people recommending a book for me to even think about it. It has also made me think about books a lot differently. There are so many different things that you can learn from books, so many life lessons can be taught through books. It changes your thinking and helps with cognition. This book really made me realize that.

As a developmental reading instructor, this type of transformation is most appreciated and will hopefully change the trajectory of future reading experiences. These reflections further emphasize the need for incorporating transformative reading opportunities with postsecondary students. Creating opportunities for students to become more critical, active and strategic readers while providing access to quality literature provides a more synergic learning experience that can help cultivate a stronger relationship with reading. Similar experiences can increase intrinsic motivation which could have a positive and lasting impact on a student's future personal and academic success.

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Scaffolding: Transforming Classroom Instruction to Support Student Growth

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ABSTRACT

Incoming college students are entering college campuses with decreased communication skills, higher levels of anxiety, and a lack of self-awareness. COVID-19 and the global pandemic have impacted students' abilities in the classroom often impacting engagement, completion of coursework, and the ability to thrive academically. This paper discusses the importance of transforming classroom instruction with scaffolding and social support and structure to support college persistence and meet the needs of incoming freshmen who have not had equal access to computers, instruction, or experience with college benchmarks.

Keywords: scaffolding, classroom support, COVID-19, enrollment, student success, student support

Heraclitus, the Greek philosopher, said, "Change is the only constant in life." Communication changes. Society changes. Needs change. People change, and what people need to thrive also changes. Graduating college requires students to thrive not just survive. Since the global pandemic, students are entering college campuses with decreased communication skills (Seideman, 2021; Rohan, 2020; Westgarth, 2021; Chen et al., 2023; Osler & Zahavi, 2022) and higher levels of anxiety (Jehi, et al., 2022; Lee et al., 2021).

COVID-19 impacted individual social growth and coping mechanisms, which for college students often resulted in changes to engagement, completion of coursework, as well as self-awareness of behaviors which can impede learning and impact one's ability to thrive academically. Educators must re-examine their teaching practices and make sure they are meeting students where they are emotionally, socially, and cognitively. If educators fail to be responsive to these increased needs for students impacted by

COVID-19, colleges and universities are going to have an even greater decline in student enrollment and retention (National Student Clearing House Research Center, 2023, p.1).

Current College Freshman

The global pandemic changed many things for the typical incoming college freshman. Historically, first-generation college students experienced challenges associated with acclimating to the new postsecondary learning environment (Choy, 2001), often, feeling less supported while attending college (Tinto, 1990; Lohfink & Paulsen, 2005; Longwell-Grice, 2008). However, since the pandemic, a majority of college freshmen need more support (Westgarth et al, 2021; Lee et al, 2021). This increased need for support is a direct result of learned behaviors during the pandemic. Understandably, to survive and reduce stress, people isolated and reframed how and when they completed tasks or engaged with others. Regrettably, these learned behaviors and coping mechanisms followed them to college. Faculty have reported changes in absenteeism, course completion, cognitive engagement, class participation, and overall social engagement (Gee et al., 2023; Xu & Cheng, 2021;). Educators might be thinking - How exactly have things changed and how is this impacting education?

Many factors contributed to this change. First, during the pandemic, high school students had uneven internet and social access (National Center for Education Statistics, 2022; Stelitano et.al. 2022), which lead to varying degrees of academic preparedness. When a student does not feel prepared for class, they often disengage. Once disengaged, it can be difficult to re-engage so many students did not, which led to many falling farther behind and needing additional supports. Research shows that more students are entering colleges and universities needing additional support in math, English, and reading. In fact, according to the ACT Profile Report (2022), the class of 2022 was the lowest performing class in the past 30 years in standardized test measures of college readiness skills: 42% of graduates failed to meet any college readiness benchmarks; 22% met all of college readiness benchmarks. This is about 10% higher than recent trends. Consequently, 78% of high school graduates would need academic support if they enrolled at a college or university. This is a significant need and requires transformative teaching. Instructors must meet students where they are cognitively and socially in order to help them thrive and successfully complete college. There are two main areas where students need targeted support: academic comprehension and social support.

Necessary Academic Supports

More students need literacy support centered on comprehension (Bruggink et al., 2023; Sun et al., 2021; Roehling et al., 2017; Torgesen et al., 2007; Perfetti et al., 2005). Up until recently, one might suggest universities offer increased developmental courses; however, the data about the effectiveness of developmental coursework has been mixed. Some research showed developmental language arts courses resulted in higher levels of persistence (Boatman & Long 2010), while another study from a working group showed that developmental courses that were non-credit bearing, failed to provide any protective effect for community college students (Complete College America 2012). This resulted in most community colleges eliminating developmental courses and placing students directly into credit-bearing courses, arguing that supported instruction in traditional entry-level language arts and math classes was superior to offering developmental courses. Supported instruction requires significant adjustments for all faculty, which may be difficult since many faculty are not educated in best practices associated with teaching, but, rather, purely content. Research into the best practices for supported instruction instead of developmental coursework is ongoing, but the term is non-specific and not likely to result in any changes to teaching frameworks. Like many educators,

this paper does not advocate for reverting to gateway developmental courses (McGee et al., 2021), where students continued to flounder and experience a delay in earning college credits. This is not effective; however, adaptations to instruction are necessary. In the past, this might have mainly impacted developmental courses and the instructors teaching them. However, this is no longer the case given recent changes in program enrollment at universities and community colleges across the nation, with a shift toward enrolling students directly into their program of choice, bypassing various types of developmental instruction (Bailey et al., 2015; Jenkins et al., 2019). This means professors in all disciplines must be ready to meet the needs of students who have not had equal access to computers, or rigorous instruction during the pandemic (Education in a Pandemic: The Disparate Impacts of COVID-19 on America's Students, 2021). Scaffolding, or a tiered system of teaching (Vygotsky, 1978; Wilson & Devereux, 2014; Wooten et al., 2014; Zwiers, 2006), must be employed to aid in comprehension and help students develop the skills necessary for transitioning to college.

Students need adapted, lower-risk course assignments with increased use of modeling to demonstrate how to work though course material. Providing instruction with gradual increases in content complexity helps learners develop metacognitive skills necessary for improving self-awareness, self-efficacy, and other college-level knowledge acquisition skills. However, many still need exposure and time to build college-level knowledge acquisition skills. Figure 1 illustrates different types of scaffolding and the support each offers.

Figure 1: Scaffolding Support Chart

	Scaffolding and Support			
Scaffolding Type	Cognitive Support	Self-Awareness Support	Communication Support	Social Support
Explicit Teaching and Modeling	X	X		
Group Work	X		X	X
Gradual Release	X	X	X	X
Rubrics with Self Reflection	X	X	X	

Graduated levels of risk-taking in the classroom results in increased engagement. Creating a safe space in class to increase engagement includes using various types of scaffolding. For example, explicit instruction (Riccomini, et. al., 2017) is beneficial for all students because questions are answered as directions are given and students feel prepared to complete assignments, which leads to increased engagement. Similarly, group work, which consists of students working with a partner or within a small group, supports cognition and self-awareness because students can consult with one another as they work through an assignment. Students can evaluate their thinking alongside their peers. Similarly, the gradual release model, a slower rate of introduction to complex material, or an initial slower pace that increases by the end of the semester, (Fisher & Frey, 2013), used with learners of all age, utilizes the concept of whole class instruction followed by small group or partner work, and, finally, individual work. Each component of the gradual-release model raises self-awareness and improves communication and cognition because students work through questions and misconceptions in course work with immediate instructor or peer feedback. This type of support encourages engagement in social learning models. The gradual release model improves cognition, communication skills, self- awareness, and, most importantly, it teaches students how to learn (Fisher & Frey, 2013). Using the gradual-release model helps students meet end-of-semester learning goals by increasing forms of student independence. Building student independence and self-discovery leads to greater self-efficacy, another important factor connected to college success (Robbins et al., 2004).

Students exiting the COVID-19 pandemic not only benefit from modeled instruction in social learning modes, but they also benefit from increased structure in evaluating their work and learning to self-evaluate with the benefit of in-person instruction. Transforming the use of rubrics from a passive tool to an active teaching strategy greatly increases student performance and their comprehension of editing and revision techniques.

Traditionally, an instructor attaches a rubric to the assignment as a method of grading or providing graded feedback. Some students look at it. Most do not. Implementing a scaffolded, self-reflection and self-assessment assignment combined with the rubric dramatically improves the effectiveness of the rubric since it requires students to self-assess and self-reflect, which leads to increases in self-awareness and a better understanding of the grading and revision process (Ifenthaler et al., 2023; Alt & Raichel, 2022; Morris et al., 2021; Bourke, 2018). Figure 2 illustrates this type of interactive assignment rubric that can be implemented to better support student learning and self-awareness. The final right-hand column of the rubric requires students give evidence of the components in their paper that meet rubric or assignment criteria. If components are missing, students must explain when and how the paper will be revised to include them. Finally, the prompt at the bottom also asks students to grade themselves. Self-assessing, identifying missing components, and planning for a final revision are all key components of increasing self-awareness. Making students work with the rubric means, in essence, that the rubric evaluation is an extension of the assignment. An interactive rubric assignment encourages students to alter their perspectives as writers and become editors of their work, a metacognitive strategy that builds students' foundational knowledge of anticipating how their work is received and evaluated, a very explicit manner of teaching editing and revisions skills as a component of composition.

Figure 2: Argumentative Essay Rubric with Self-Assessment Component

Argumentative Essay Rubric					
Total Possible	**Paper Component**	**Developing**	**Proficiency**	**Mastery**	**What page or paragraph(s) is this found? If missing, state missing.**
5	Introduction	Does not include a hook or background information.	Includes background information.	Includes a hook and background information.	
5	Thesis/ Claim	Thesis may be obvious or unimaginative. Thesis and purpose are somewhat vague.	Contains an arguable claim that is somewhat original. Thesis and purpose are fairly clear.	Contains an arguable claim that develops fresh insight and challenges the reader's thinking.	
20	Support/ Reasoning	The writer focuses on own thoughts and beliefs about the topic; neglects the rhetorical elements. Offers simplistic, undeveloped, or cryptic support for the ideas.	The writer offers solid but less original reasoning. Assumptions are not always recognized or made explicit.	The writer includes all 3 rhetorical elements (logos, pathos, ethos) in the development of ideas. Assumptions are made explicit. Details are relevant, original, and convincingly interpreted.	
10	Opposing View and Rebuttal	Refutation missing or vague. Obvious lack of sound, logical argument throughout.	Author acknowledges the opposing view, but does not present sound counterpoint.	Author acknowledges the opposing view and argues it logically.	
5	Conclusion	Does not summarize the main points.	Summarizes the main points.	Summarizes the main points, the counterargument, and does not introduce new information.	
5	Grammar/ Mechanics	Errors so numerous they distract the reader and skew the writer's meaning	Occasional minor errors do not distract the reader or interfere with meaning.	Essentially free from mechanical, grammatical, punctuation, and spelling errors.	
Self –Assessment: How would you grade yourself and why? Explain. Note: If elements are missing from your paper, explain when and how you are going to fix it before the due date. / 50					

Interactive rubrics can be used in any discipline. The instructor simply needs to provide opportunities for students to examine and self-reflect. Figure 3 illustrates an example of an interactive math rubric. Using this rubric, instructors could ask that students simply check each box that applies to them and reflect at the bottom, or they could require students to include written responses for each section; for example, solving each problem or writing out the steps for solving the equation, then reflecting near the end. Any type of metacognition will support self-awareness.

Figure 3: Math Self-Assessment Rubric

Unit 4: Factoring – Self Assessment				
ARTIFACT	**I can solve the problem without giving up.**	**I can explain my thinking in writing.**	**I can show my work in many ways.**	**I can teach others how to solve each problem.**
(x -2) (3x +3)				
(4x – 3) (4x + 3)				
(5x -2) (5x-2)				
Reflect: What areas do you still need support with and <u>why</u>?				

Necessary Social Supports

Since the pandemic, social interaction, human interaction and the freedom to move have really been missed (Brown & Crawford, 2022). Students crave more communication and opportunities to learn together. Group work and gradual-release instruction include social engagements and cooperative learning communities. Educators must find ways to transform teaching to include social and academic engagements because both have been shown to increase student learning (Johnson et al., 2006) and positively impact college persistence (Hu, 2011). This type of teaching, with the use of social engagement and cooperative learning communities, needs to include explicit instruction, using modeling, to encourage students to use social networks to learn in ways denied to them during the COVID-19 distancing and quarantining requirements period.

Cooperative learning models and scaffolding techniques combined with social supports help overcome some of the stress-induced behaviors demonstrated by adolescents worldwide that stemmed from a lack of social engagement (Gazmararian et al., 2021). During the pandemic, students had increased rates of depression due to problematic online learning and social isolation (Magson et al., 2021). By helping students make social connections and modeling in-class and online discussion norms, educators can assist students in ameliorating some of the negative effects of COVID-19 on their

learning processes. Figure 4 gives examples of several types of cooperative learning models and how they support building essential social skills and soft skills, which research explains is necessary for college success (Kyllonen, 2013). As students are given

Figure 4: Cooperative Learning Models

Cooperative Learning Models and Skill Development					
	Communication Skills	Conflict/ Resolution Skills	Cooperative Learning Skills	Critical Thinking Skills	Leadership Skills
Peer Support	X		X	X	X
Group Work	X	X	X	X	X
Inquiry-Based	X		X	X	X
Jigsaw	X			X	
Think-Pair- Share	X			X	

the opportunity to engage with one another academically, they are also further developing skills essential to enter the workforce; better communication, critical thinking, leadership, and conflict resolution skills.

Making the Change

The global pandemic undoubtedly changed society. Students entering the classroom are vastly different, with increased social and cognitive dissonance. Given society's need for a more educated workforce to keep up globally, educators must meet this moment. Transformative teaching practices better meets the needs of students, and educators must as, H.G. Wells famously wrote, "Adapt or perish." Strategically using scaffolding to assist in social and cognitive development can better ensure that college is within reach for the growing number of students impacted by the pandemic.

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SPD in the College Reading and Writing Classroom

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ABSTRACT

Sensory processing disorder (SPD) is both a physical and mental obstacle for many students in the college reading and writing classroom. As SPD has a high rate of comorbidity with other disorders, such as autism spectrum disorder (ASD), anxiety, and depression, instructors should be aware of the significant impacts SPD may have on their students, both in the classroom setting and, in their work, outside of class. By transforming the college classroom into a more welcoming space for students with sensory challenges and adopting a universal design for learning (UD) approach for teaching, college instructors can better meet the needs of a campus population that is increasing dramatically each year.

Keywords: sensory processing disorder, college teaching, reading, writing, autism spectrum disorder, anxiety, depression, universal design for learning

Developmental Instruction Colleagues:

As Ta'Nehisi Coates has insightfully stated: "Writing is ... almost an act of physical courage" (Coates, 2014). The developmental reading and writing classroom calls for daily "acts of physical courage," as well as unique resilience and the overcoming of significant mental and physical hurdles. Our students quixotically attempt to joust windmills, overcoming impossible obstacles in an attempt to survive and "move on" in their educational journeys. One of the most significant "transformations" educators face is the shift toward greater numbers of neurodivergent students and students with disabilities, from 6 percent in 1996 to 19 percent more recently (Blasey et al., 2023). Sensory processing disorder (SPD) is a challenge that a great number of students face, including those with disorders like autism, anxiety, and depression, and it can present both mental and physical challenges in the college classroom.

As a neurodivergent educator with significant (SPD), I can personally testify to the physical difficulty of writing. Sometimes speech to text is the better option, but even that can be difficult to manage. Typing is physically painful for me; I have significant motor dysgraphia and my fingers often "trip over themselves." Writing by hand is even more painful, and my writing is almost completely illegible. To prove my point, I was once asked at a courthouse to initial my own signatures, as the clerk was having difficulty believing my signatures on a legal document were made by the same person from page to

page. I avoid writing by hand wherever possible. While typing is painful, I can type quickly at times: I survived five years as a newspaper journalist creating publications for daily deadlines.

Perhaps important to note, for those who might argue "We should teach cursive in school!": I was trained to write in both cursive script and print in elementary school. The first grade of "B" I ever made was in 4th grade, for "handwriting." I could not write the same letter five times in a row, and make each letter look the same, to save my life. I still cannot.

As I type this, I have ear plugs in each ear and over the ear headphones, similar to those used in construction, over my ears. I have both aural and olfactory "defensiveness" -- I am often overwhelmed both by sounds and odors. This has been true for me since I was a young child, by age 2 or 3 years. I often struggle with "misophonia," or sensitivity to sound: for this reason I often prefer to eat my meals alone. Strong odors cause me to eat alone for the same reason. Textures and the "feel" of clothes can also be a challenge, though sound and odors are by far my biggest daily obstacle.

I have an autism diagnosis, where I tested "more severe than what was called Asperger's" according to my diagnosing psychologist, despite the fact I am "highly verbal," can remain employed, and completed a master's degree in "Literacy and Second Language Acquisition." I also have diagnoses of ADHD, depression, and anxiety. Needless to say, I often have much in common with my students in the developmental reading and writing, first-year writing, and student success courses I teach.

While autism (92 percent correlation with SPD) is a big part of the impact SPD has in the classroom, many other conditions also correlate with SPD, such as PTSD, OCD, depression, anxiety, TBI (traumatic brain injury) and a wide range of other disorders (Paybvash et al., 2019; Goodman-Scott, Burgess, & Polychronopoulos, 2020). I would argue the probability that instructors have at least one or two students with SPD in each class roster would be very, very high. Recent estimates are that up to 16 percent of school age children in the U.S. are impacted by SPD (Paybvash et al., 2019) while other estimates place the number as high as 20 percent globally (Goodman-Scott, Burgess, & Polychronopoulos, 2020).

Researchers are currently working toward an objective biomarker for SPD (Paybvash et al, 2019) using brain imaging. Significant differences between those with and those without SPD have been found on a consistent basis (Paybvash et al, 2019). In addition, a study of children grades 4 to 9 showed different brain patterns in children with dysgraphia and dyslexia when they were given a writing task. There is a high correlation between dysgraphia and SPD (Richards et al., 2015). Some students in the writing classroom are likely to be struggling, not just due to the usual stresses of college courses, but also because their brains are simply "wired" differently and the physical task of writing is a challenge.

Instructors might question why they should support a condition that is not yet recognized by the Diagnostic and Statistical Manual of Mental Disorders (DSM). The answer is 1. many would argue SPD should have been included in the previous revision of the DSM and; 2. SPD is soon to have an objective biomarker, a level of legitimacy not achieved yet by many of the disorders already listed in the DSM, and; 3. A wide range of conditions include SPD, including (but not limited to) autism spectrum disorder (ASD), attention-deficit/hyperactivity disorder (ADHD), Fragile X syndrome, obsessive compulsive disorder (OCD), substance use disorder, anxiety and depression (Goodman-Scott et al., 2020). 4. comorbidity for mental disorders is quite common, increasing the chance any student with a diagnosed mental disorder also has sensory related issues that are yet to be diagnosed, and may be impacting classroom performance (García-Gutiérrez et al., 2020).

Given how differently students may be

"wired," college reading and writing instructors need to anticipate how this difference may impact classroom performance. What might seem completely fair to ask of a "neurotypical" student in the writing classroom could be an extreme challenge for a student impacted by SPD. What is "painful" for a neurotypical student may be quite different than what is painful for a student affected by SPD (Bar-Shalita & Parush, 2013; Kornblau et al., 2020). Instructors must recognize a nationwide college phenomenon: many students with a right to accessibility accommodations will never ask for them, or visit a campus office of accessibility. Even students who utilize accommodations at some point may not do so again, for a variety of reasons (Elias & White, 2017; Blasey et al., 2023; Weiss & Bittner, 2022).

How do we address the disconnect between what students have the right to access and what they are willing to ask for? How can instructors better serve students with these kinds of challenges in terms of their college reading and writing tasks?

My honest answer is: I don't know. I hope to find some answers, as many as possible, but such a complex classroom dynamic has no easy answers, and educators would be wrong to expect it. There must be a balance between meeting the needs of each individual student and maintaining some modicum of sanity as a busy instructor with a wide range of duties.

My first suggestion would be allowing "sensory filters" of any kind that are helpful. If a student needs earplugs or headphones in class, this should be encouraged. And yes, adopting a "universal design" principle means this option should be available to all students. Painful to some, I know, but if you believe in true access, then in a just classroom environment universal design (UD) must be adopted. Classroom spaces may need to be reimagined, and the traditional role of "management" of the classroom space may need to transform dramatically, including "zones" where students with sensory challenges can work successfully (Corbett, 2017; Clément et al, 2022).

Perhaps one way to transform the classroom space would be to allow students to use ear plugs and/ or headphones during class: instructors might adapt online connectivity applications like Zoom even in face-to-face class meetings and turn captions on, while giving students the option of typing or speech to text in Zoom chat for "participation" in discussions. No doubt other technologies still in development may be key to this kind of transformative practice.

Another option: while encouraging students to work in groups for the learning principle "distributed knowledge," (Gee, 2005) give students with challenges like autism or anxiety the option of working alone when needed, and as needed by their choice. The path to "participation" must be flexible and vary widely.

One-to-one conferences have long been used in the writing classroom, and certainly that is one way to meet the needs of many of these students. Many instructors conference with their students, but students with SPD might need even more frequent support. It might be well worth the time spent to create optional time in the last 10 minutes of each class meeting for students to have the option of asking questions and getting clarification on reading or writing tasks (Clark Lyon 1985; Harris, 1986). Collaboration with tutors or other campus supports might also be explored, when fully embraced by the student with Family Educational Rights and Privacy Act (FERPA) "need to know" guidelines followed.

Corbett (2017) explored the use of (UD) in the developmental writing classroom, and the four principles are a helpful guide as we begin exploring the possibilities for better supporting neurodiverse students in the college classroom (p. 33-34).

One of my former graduate professors asked me about the "time commitment" for serving these students, as many instructors are already stretched thin with teaching and other responsibilities. Here is my response:

1. It's completely fair to ask instructors to attempt to transform their classrooms into more welcoming spaces for students with sensory challenges.
2. The student population is changing nationwide (Blasey et al., 2023). Without meeting the needs of students with significant challenges like SPD, ASD, and other mental disorders, we are destined to fail in our mission. Want to improve retention and classroom performance? Meet the needs of students with SPD and other mental and physical challenges. SPD is also a physical challenge to writing: there are many days where I am overwhelmed by just trying to type or write by hand, due to dysgraphia. The distorted perception of the "pain" from a certain pitch voice, or the sound of an air conditioning unit, might also impact student performance. These "invisible" physical obstacles may be a daily reality to many of the newest generation of students as they negotiate their college courses.

In the fall of 2023, I had a student who had memorized pi to 150 plus decimal points, a phenomenal achievement. In many ways, he was a genius level student. But if I had not "met him in the middle" somewhat, I don't think he would have thrived and made an A in developmental writing. I met with him individually at the end of class often to answer questions and clarify any confusion: I believe this lowered the student's anxiety about the course and helped him to excel. He knew that he could reach out to me at any time if he felt frustrated or confused, and I believe that made a difference in his ability to perform.

Even just knowing that we will work with them, that we will try to create more equity (even if equity is never perfect), helps many students struggling with the "physical act of courage" that writing for college can be.

The previously mentioned "time at the end of class," something I am now doing for all of my developmental reading and writing courses, which I am currently teaching synchronously online. One reason I choose to do this is an experience I had about 10 years ago in a face-to-face developmental writing class. We were discussing an upcoming writing assignment and, seemingly out of nowhere, a student "blew up" in class, clearly frustrated. I asked him to meet with me after class that day so that we could discuss it.

When we met, he shared with me that he had an auditory processing disorder. Sometimes what he heard just didn't quite make sense to him "in the moment," during conversation. Our discussion of the assignment that day just wasn't making sense to him. From that day on, I offered to meet with him after any class meeting where he had confusion or questions he needed to ask. By offering this support, his frustration level and anxiety about the course immediately decreased, and he completed the course successfully.

By always having the time built into my developmental course, every student with any kind of confusion has access to me at the end of class to ask questions or get support. This kind of universal design supports students, even the ones who have not shared a physical or mental challenge, or others who are neurotypical but just need a bit of extra help.

To conclude, I would like to return to where I started: the role of the instructor. Many instructors face challenges from SPD or similar conditions each day, though they may not feel empowered to ask for any kind of accommodations.

In a social media group of about 9000 adults focused on SPD where I am a member, I asked a question about typing responses to students rather than trying to respond verbally. I have recently realized that I need more time to respond, perhaps due to my challenges from autism. While I already give students the option of using their mic or typing to share for discussion, I had not thought of giving myself the same consideration. In the future, this might be an accommodation I request from the university.

A member of the group responded to my question. This person prefers to remain anonymous and not share their institution, and that is understandable given the current

climate, especially for adjuncts at some colleges. They wrote, "I greatly sympathize with you. I have similar difficulties with off-the cuff lecturing or discussions with students. I'm an adjunct college teacher and teach only on Zoom at this point, asynchronously though I do Zoom office hours with students. One-on-one works okay for me even though I still have awkward moments. Mostly I get to communicate with them via email. I don't really have a suggestion for your idea of text to speech. Maybe someone else does." They went on to share how, after the college unionized in 2017, the university has been very "confrontational" with adjuncts, they are often not rehired without cause, and they do not feel like they can ask for accommodations in the classroom.

From an administrative standpoint, creating a positive environment for instructors may be an important first step to allowing them to better support students. It is difficult to imagine instructors who can offer amazing instructional environments for their students when their own situations are so tenuous and uncertain.

Thank you for considering my thoughts, experiences, and the information I have compiled here. While supporting SPD in the classroom might be a challenge, I am certain that the success of college students in the coming years will be greatly impacted by how we choose to approach this issue.

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Program Transformation to Enhance Student Success

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ABSTRACT

Transforming developmental education to promote and enhance student success is an ongoing process. This paper discusses how the Cross Curricular Career Community (C4) was developed and how frequent faculty discussion guides program evolution. Through the lens of business management theory, program changes grounded in personal and professional accountability have led to positive impacts on interactions among faculty, students, and the program in support of student agency, responsibility, and perseverance.

Keywords: developmental education, course acceleration, academic advising, learning community, discourse analysis, student mentoring

The Cross Curricular Career Community (C4) at Ferris State University is a multi- disciplinary, multi-semester learning community for students with three developmental placements in English, math, and reading. The University's Retention and Student Success unit, in collaboration with the College of Arts, Sciences, and Education, started the program to close the retention gap between the University's developmental and non-developmental population.

The original structure of the C4 program was inspired by the findings of the Learning Communities Demonstration (LCD) project, which revealed that after the one-semester interventions ended, the modest academic gains generally dissipated (Visher et al., 2008; Visher et al., 2012; Scrivener et al., 2008). A group of faculty and administrators concerned about retention of students with developmental placements met to discuss possible interventions, and from those initial discussions, the C4 program was developed (Table 1). In an effort to push beyond the limited one-semester gains, courses extended past one semester and the C4 faculty formed a faculty learning community to provide ongoing student support and assessment. This frequent assessment led to revision of program elements to support student success.

Since its start in 2016, C4 faculty have met twice monthly. The faculty group consists of cohort instructors, the program advisor, and the program coordinator. Our conversations have centered around the following questions: How is each student progressing? What issues appeared to arise from the cohort as a whole? What structures, interventions, and supports are necessary for student success? This paper details changes arising from those faculty meetings. Specific changes to the program to enhance students' learning can be seen in the comparison between Table 1, which shows the initial program layout, to Table 2, which shows the current status.

Table 1: C4 Program Elements: Program Inception

Original Placements: Developmental English, Math, Reading

Cohort:

Size: 20- 24
Selection by Retention and Student Success staff

Cohort Courses:

First Year Fall	**First Year Spring**
Beginning Algebra with Structured Leaming Assistance (student-led help sessions) English l with lab (accelerated from initial placement) Freshman Seminar	Intermediate Algebra with SLA English 2
• Reading l	• Reading 2

Supports:

Academic Advising (provided by reading instructor, principally in first year or until program entry)
Required study sessions (twice per week, both semesters of first year)

Table 2: C4 Program Elements: Current'

Original Placements: Developmental English, Math, Reading

Cohort:

Size: 20- 24
Opt-in

Cohort Courses:

First Year Fall	First Year Spring	Second Year Spring
Intermediate Algebra with lab (accelerated ji''om in ilia! placement)		
English I with lab (accelerated from initial placement)		*English 2*
Freshman Seminar *(with program framework)* Reading l		
Supports:	Reading 2	

Academic Advising *(provided by coordinator, continued throughout duration of university enrollment)*
Required and *optional* study sessions (both semesters of first year)
Program Framework
Enhanced Learning Points (applied to all cohort courses) Student Mentoring

[1] Program changes indicated in italics.

The Pilot (2016-17)

The information in Table 1 applies to the Pilot (C4P). Cohort courses included English (English 1 and English 2), math (Beginning Algebra and Intermediate Algebra), reading (Reading 1 and Reading 2), and freshman seminar (orientation course required by all incoming freshman). We moved participants from remedial English to the first English composition course and added a lab session to provide extra support. Our decision to accelerate aligned with prior results that showed promise with that practice (Jaggers et al., 2015; Asmussen & Horn, 2014; Bettinger et al., 2013; Parker, 2012). Structured Learning Assistance (SLA) accompanied both math courses. This was a typical Math Department practice for Beginning Algebra but an added feature for the C4 section of Intermediate Algebra. We included two required study sessions to encourage students to set aside regular study time, and students were required to meet regularly with their advisor.

Upon completion of the academic year, when compared with non-C4 students, C4P participants did better in math, reading, and English 1. English 2 was a different matter. The English, Literature, and World Languages Department recommends that students take English 2 in their second year or later. It was believed that the extra support structure afforded by the C4 program would mitigate that recommendation; it did not. The C4P students were unable to handle the expected independence of a second-year course during their first year at the University.

The discussion that arose during our twice monthly meetings about the students' lack of independence necessary for courses like English 2 uncovered a more pervasive issue:

although the C4P students had strong social camaraderie, those connections failed to carry over to the academic realm. We also noted persistent difficulties with perseverance and follow-through across all cohort courses. Despite our attempts to build a culture of support and accountability, the C4P students were mired in behavior that likely contributed to their being developmental in the first place: a tendency to do what was minimally required, to point a finger of blame when things didn't go well, and to attribute poor performance to a lack of ability. At the same time, we noted strong career interests and a desire to make a good living. This contradictory dichotomy - "I want a good job," but "I give up when things get hard" - led us to the business management literature to find a solution.

C4 Year One (2017-18)

The first change resulting from Pilot year faculty conversations was to seek an evidence- based framework based on personal accountability. The Oz Principle, a book published by Connors et al. (2004) for the business/corporate world, emphasized employee and organizational accountability to increase profitability. We found their principles applicable and compelling. In their work, Connors et al. (2004) discovered that a key to increased productivity lay in changing employee mindset from 'below the line' thinking (doing what's minimally necessary and issuing blame when things don't work out) to 'above the line' thinking (how can I be proactive to make things better even when it may involve risk). The authors were inspired by the Wizard of Oz story: a "journey towards awareness" in which the Oz characters, as they traveled the yellow brick road, moved from "ignorance to knowledge, from fear to courage, from paralysis to powerfulness, from victimization to accountability" (Connors et al., 2004, p. 4). In that context, Connors et al. (2004) devised four action steps, which they referred to as the Oz Principle: See it: acknowledgement of the reality of a situation; Own It: acceptance of full ownership of behaviors contributing to current circumstances; Solve It: establishment of a plan to tackle challenges; Do It: implementation of productive change and accepting responsibility for that change. We felt integration of the Oz Principle into the C4 program might help our students transcend past and present challenges through personal accountability and perseverance, the essence of above the line thinking. As an operational step, we added Enhanced Leaming Points (ELP) to each cohort course. The goal of ELP, in alignment with the Solve It, Do It steps of the Oz Principle, is to help students develop habits of mind exhibited by traditionally successful students. In each cohort course, ELP accounts for about 10% of the course grade. Students earn ELP by attending office hours, submitting assignments early, seeking help at the Academic Tutoring and/or Literacies Centers, revising tests and quizzes, working well on collaborative classroom activities, and demonstrating effort well beyond minimal expectations.

The second change involved English. Our faculty conversations during the Pilot phase led us to see Reading 2 as a necessary bridge between English 1 and English 2. Shifting English 2 to the spring semester of the second year sandwiched a semester of non-cohort course work in the fall semester of the second year. This change would maintain students' connection with the C4 program and improve the quality of personal connections within the cohort.

Year 1 faculty conversations uncovered two additional issues to consider. First, instructors reported some students' tendency to see ELP as extra credit or as being unnecessary. A second problem involved participation. Most of the participants contributed to a positive working culture. A handful did not; they had a disruptive effect on the group. Examination of the procedures to determine what could be changed in the program to alleviate such disruptions revealed that part of the problem was that the Pilot and Year 1 cohort students were placed into the C4

program by Retention and Student Success staff rather than opting in.

C4 Year 2 (2018-19)

Faculty observations of the Year l group led to several program changes. First, to strengthen cohort culture, we moved from staff selection of students to opt-in admission. This involved sending invitations to eligible students and placing decision-making in their hands in alignment with the See it, Own It steps of the Oz Principle Framework. This change also reflects related literature on the importance of student choice and student engagement (Adams et al., 2017; Riggs & Gholar, 2009).

The second change involved further course acceleration. Assessment of student progress during the Pilot and Year 1 revealed that students could be accelerated in math and that such a move, together with acceleration in English, would help reduce time-to-degree, limit student debt, and serve as an incentive for the newly developed opt-in feature (Boatman, 2021; Jaggars et al., 2015; Venezia & Hughes, 2013).

The third and fourth changes were related to the Oz Framework. For the freshman seminar, the focus of the course shifted from simple identification of resources to strategic utilization and leverage of those resources. Also, one of the two weekly study sessions became optional, and attendance became tied to ELP. By choosing to attend the optional study session, students showed more evidence of "above the line" behavior and took ownership of academic progress.

While these changes appeared to show promise, Year 2 faculty conversations uncovered several patterns. First, students were not considering their short-term and long-term academic goals and their own role in achieving them. Second, students were still not internalizing the rationale for ELP nor realizing the role that Oz Framework could play in their academic success. Thus, we considered the possibility of incorporating discussion of the framework more intentionally into advising conversations. We thought we should move the advisor role to a non- cohort instructor as a means of disconnecting the advisor/student relationship from instruction and as a means of engaging an additional faculty member.

C4 Year 3 (2019-20)

Student academic goal planning and helping students realize the role that ELP can play in their success became a strong element of advising. The program coordinator, who does not teach a cohort course, assumed the principal advising role. Because of his administrative experience, he was well-positioned to recruit, to advise, and to guide transition into academic programs. In that context, we expanded advising to include greater personal reflection on academic progress. This entailed identifying weaknesses and how to address them. For instance, when a student was doing poorly in a course, the advisor and student tried to determine the source of the student's performance issue and formulate a plan to remediate it. Sometimes, this involved adjusting the student's approach to studying; at other times, it meant seeking academic support (tutoring, Writing Center, etc.), both of which are inherent in ELP. On occasion, reflection on academic performance led to reconsideration of program choice. These advising conversations were meant to incorporate, more intentionally, the See It, Own It, Solve It, Do It steps of the Oz Principle, as the advisor and student collaboratively sought to seek solutions to support student success.

Academic Year (2020-21)

The pandemic shutdown occurred in March 2020. As a result, we decided not to recruit a new cohort for the 2020-21 academic year, although we continued to support students from the previous cohorts. During the 2020-21 academic year, faculty met via Zoom to discuss how to support students during the pandemic and to work through additional program revision arising from our ongoing

conversations. During this time, we realized that our faculty discussions were somewhat inefficient as we would often fixate on individual student issues over which we had limited control. Moving to Zoom enabled us to record our faculty conversations. This provided a means to start a formal and methodical analysis of our conversations through discourse analysis, a qualitative method used to draw meaning from language, in our case, vocal language (Duffy & O'Rourke, 2015; Dudley, 2013; Mullet, 2018).

C4 Year Four (2021-22) and Year Five (2022-23)

Since its inception, C4 faculty have met regularly to discuss individual student progress, to consider interventions, to provide student assistance, and to generate ideas for program revision. During Year 4 and 5, we continued the formal analysis of our conversations to help us better understand our how our conversations did or did not assist students' growth as autonomous and successful learners, as well as increase the effectiveness and efficacy of our interactions in our faculty group.

Preliminary results of our discourse analysis showed that we spent a disproportionate amount of time on non-academic topics connected to individual students who struggled the most. In response, we created a process to systematically assess each students' academic performance, noting areas of success and areas of concern, along with action steps for follow-through. As we transformed our conversations, our meetings became more balanced in terms of attention paid to each student, with a greater focus on academic performance. We continued to encourage students to seek counseling and other support mechanisms not related to academics. These changes have helped us better identify and remediate student academic issues, facilitate more effective planning, support reflection on instructional practice and program impact, and provide students with professional help when needed.

While we incorporated the Oz Framework in each course through use of ELP, made it a focal point of the freshman seminar, and connected it to the weekly study session program, we still had difficulty with student buy-in. One of the members of the faculty group proposed student mentoring as a means of better supporting the Oz Framework. Seeing and working with a more senior, successful C4 student who had overcome similar academic challenges would help the steps of the Oz Principle become more tangible. Research on student mentoring supported this idea (Andreanoff, 2016; Hagler et al., 2021; Shaughnessy, 2013). As a result, in Year 5, we started a formal mentoring program to support the development of leadership capabilities of returning students and provide incoming students with academic and social peer support in alignment with the Oz Framework. Our incoming students have told us they appreciate the sense of connection they received through the regularly scheduled meetings with older students. And mentors reported that mentoring younger students had a positive effect on their confidence and that becoming a role model to others had a positive impact on their own personal accountability.

Program Summary

At the end of the first year of study, C4 students from the first four cohorts had a higher average cumulative GPA, fewer D, F, and withdrawal (W) grades, more credits completed per student, and a higher probability of returning to the university for the second year when compared with non-participants with three developmental placements.

Table 3[2]: Comparative First Year Performance, C4 Versus Non-C4 (2012-21)

Group	*n*	Cumulative Average GPA	Number ofDFW Credits Per Student	Cumulative Credits Earned Per Student	Percentage Returning for Year 2
C4	90	3.10	3.4	20.2	74%
Non-C4	260	2.61	6.2	18.3	59%

[2] Data for C4 did not include the Pilot year, as we were just getting started, and did not include the fifth and most recent cohort because end-of-year data from that group had not processed at the time this paper was written.

The data presented in Table 3 shows the promise of the C4 program in promoting student success. Since its inception, cohort faculty have engaged in ongoing conversations about individual student progress and the efficacy of program elements. The C4 program has continued to evolve. We started with a collection of cohort courses and have since transformed into a comprehensive program that features course acceleration, relational advising, student mentoring, and required and optional study sessions. The program is informed and guided by a personal accountability framework taken from business management literature, the Oz Principle. The process of ongoing improvement is driven by regular, intentional conversations among program faculty. In that sense, C4 is a dual learning community that consists of students on one hand and faculty on the other, with student success as its principal goal and a spirit of transformation as its guiding principl

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