A THEORETICAL MODEL OF STUDENT LEARNING IN AN ACADEMIC SERVICE-LEARNING COURSE: DIVERSITY AND CIVIC OUTCOMES

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Abstract:

A qualitative-quantitative mixed-methods longitudinal research study was conducted to measure differences in civic and diversity outcomes in a cross-sectional sample of 138 undergraduate students. The quantitative results indicate that students improve their social justice attitudes, awareness of White racial privilege, racial-cultural-ethnic identity, and interests in multicultural work from the beginning of the semester. The qualitative findings replicate and extend the quantitative results. Career development and opportunities for growth were detected as unexpected themes that emerged from the data. The use of the mixed-methods approach provided an opportunity to conceptualize how students reformulate their diversity attitudes and acquire civic skills in an academic service-learning course. Implications for teaching and learning are discussed.

Keywords: academic service-learning, diversity and civic outcomes, multicultural education

1. Introduction

Institutions of higher education have an obligation to promote and advance multicultural education so that students develop a commitment to social justice and active citizenship. Scholars have explored the effects of academic service-learning (ASL) on student learning in the broader social context and surmised that ASL is a promising approach for fostering students understanding of social justice and civic engagement (Cole & Zhou, 2014; Eyler

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& Giles, 1999; Saavedra, Ruiz & Alcala, 2022). Academic service-learning (ASL) is a pedagogical approach in which students connect their service experiences to their academic studies through critical reflection (Eyler & Giles, 1999). Research over the past two decades has consistently demonstrated a positive link between ASL and civic outcomes such as cultural awareness, reduced prejudice, increased empathy, increased civic interest, improved social responsibility, and engaged citizenship (Castellanos & Cole, Cole & Zhou, 2014; Conner & Erikson, 2017; Mitchell, 2015; Moely *et al.*, 2002; Saavedra *et al.*, 2022; Tinkler, Tinkler, Reyes, & Elkin, 2019). ASL may also serve as vehicle for teaching students about diversity by exposing them to different cultures in the community (Chenneville, Toler, & Gaskin-Butler, 2012). Diversity outcomes have been examined less often compared to civic outcomes in ASL courses. Linking ASL with both diversity and civic outcomes may advance student awareness of the origins of complex social problems and foster a commitment to social change (Chenneville *et al.*, 2012). The broad aims of the study are to measure differences in diversity and civic outcomes using a qualitative-quantitative mixed methods research approach and to use the qualitative data to construct a framework of student learning based on social psychology and cognitive development theories.

The scholarship on ASL has produced mixed results regarding diversity outcomes. Educators have implemented ASL in psychology courses with promising results such as prejudice reduction, increased empathy, and increased comfort in discussing race and social justice issues (Chenneville *et al.*, 2012; Saavedra *et al.*, 2020). Students engage more deeply in their learning, cultivate awareness of marginalization in their communities, and gain valuable experiential practice to change these oppressive realities (Saavedra *et al.*, 2020). Some studies report that ASL contributes to a host of positive outcomes including increased commitments to social justice and improved intercultural or cultural competence (Saavedra *et al.*, 2022; Simons *et al.*, 2021), while, other studies indicate that ASL leads to unintended consequences such as reifying stereotypes and reinforcing privilege perspectives (Collopy, Tjaden-Glass, & McIntosh, 2020; Conner & Erikson, 2017; Mitchell, 2010). In fact, Conner and Erikson (2017) caution that ASL contributes to increased stereotyping, prejudice, and bias on the part of learners toward the very groups intended to benefit from their service. ASL courses that do not include diversity or social justice perspectives, explicit diversity objectives and outcomes, or include poorly designed service activities may contribute to increased stereotyping in students (Conner & Erikson, 2017; Simons *et al.*, 2021). The absence of critical discourse and self-reflection in an ASL course may further reinforce students' perceptions of community partners as deficient, and, perhaps, lead to a missed opportunity for a transformative learning experience in both students and partners (Castellanos & Cole, 2015; Mitchell, 2012).

Attitude change and skill development are difficult to achieve even if ASL courses and service experiences are carefully designed and well implemented. Research has investigated the theoretical conditions under which service-earning promotes positive change in diversity attitudes. Gordon Allport's contact theory proposes that favorable

attitudes develop when individual members of two groups who differ in race are brought together (1979). The concept of attitudinal change is derived from research on ingroup and outgroup behaviors. The most important aspect of this theory is the notion that contact between ingroup and outgroup members should be long-term so that relationships can be established and cognitive assimilation processes can occur. Cognitive processes are also linked to cognitive dissonance (Festinger, 1957) and cognitive-development theories (Wadsworth, 1995). Students who participate in service-learning are often immersed in a cultural that differs from their own. Students learn about the community, forge relationships with service recipients, and acquire information that negates their preconceived views. Students formulate their attitudes about recipients (i.e., the parents do not care about their children's education), and after they obtain information that conflicts with their perspectives through their relationships with recipients (i.e., parents are concerned about their children's education), they experience dissonance. Students reformulate their attitudes to reduce feelings of dissonance.

The concept of cognitive dissonance is similar to the disequilibrium process in Piaget's cognitive-development theory (Bowman, 2009). Students have preconceived views or a mental representative of the community (i.e., do not cross the bridge to go into the community because it is dangerous). Students acquire new information about the community through their service work and attempt to fit their newfound perspectives into existing views (i.e., disequilibrium). Students who change their perspectives of the community (i.e., the community is not dangerous) demonstrate the accommodation process; while, those students who retain their views demonstrate the assimilation process of cognitive-development theory (Wadsworth, 1995). In addition, students retain their stereotypes through participation in service activities that reinforce their preconceived views (Dunlap, Scoggin, Green, & Davi, 2007; Hess, Lanig, & Vaughan, 2007). Student perspectives of Whites as leaders or helpers (i.e., let's save the community) and Communities of Color as underserved recipients in need of assistance or saving in a service context further reinforces both stereotypes and Whiteness (Saavedra *et al.*, 2020; Mitchell 2010). White and BIPOC students (i.e., Black, Indigenous, People of Color) engage in service-learning at the same rate, although their experiences with recipients and views of the community tend to differ (i.e., Sweat, Jines, Han, & Wolfram, 2013; Valencia-Garcia & Coles-Ritchie, 2021). White students are likely to leave their service experiences with their stereotypical attitudes intact unless their perspectives of Whiteness are challenged (Espino & Less, 2011; Mitchell, 2010). ASL will not challenge students to rethink perspectives or reexamine attitudes unless instructors decenter Whiteness in service (Mitchell, 2010), evaluate their own frame of service-learning and move beyond a charity model (Littleford & Jones, 2017), and challenge students to think about their own perspectives (Bowman, 2017). The implementation of ASL in a multicultural education course may contribute to greater impacts in students' understanding of diversity and social justice issues. The goal of this study is to advance this area of research by examining diversity and civic outcomes for students enrolled in a multicultural education course designed for education and psychology majors as part

of a liberal arts and an education curricular. The infusion of ASL and diversity content in an educational psychology course is critical to preparing students as prospective teachers and school-related professionals (Tinkler *et al.*, 2019).

The current study addresses the following research questions:

1) Are there differences in diversity (cultural awareness & skills, multicultural attitudes, racial-cultural-ethnic identity, unawareness of White privilege, racism, and institutional discrimination, & White empathetic reactions) and civic (i.e., civic responsibility, interpersonal problem-solving, leadership skills, social justice attitudes) outcomes from the beginning to the end of the course for students exposed to ASL in an educational psychology course?

2) What and how do students learn in an educational psychology course?

3) Is there consistency about diversity and civic outcomes in the qualitative and quantitative findings?

2. Method

2.1 Participants

A cross-sectional sample of 138 undergraduate students enrolled in an educational psychology course from Fall 2015 to Spring 2022 at a private teaching university in a northern metropolitan area took part in the study. Students self-identified as White (78%), African-American (9%), Latino/a (5%), Asian-American (4%), Middle-Eastern (4%), and Biracial (2%). Of these students, 70% were female and 20% were male and their mean age was 20.39 years (SD=1.47). Forty-six percent of students reported taking a service-learning course and 30% of them also reported taking a diversity course prior to the current course. The outbreak of the COVID-19 pandemic required courses and service work to come to an abrupt halt and transition to online instruction and either engage in Eservice or virtual work. Twenty-nine percent of students were enrolled in the educational psychology course during the pandemic. There were nonsignificant differences observed in pretest scores for students enrolled in educational psychology from 2015 to 2022.

2.2 Course Content

The Educational Psychology course is designed to meet the Pennsylvania Department of Education standards for teacher certification and fulfills a distribution requirement in the elementary and secondary education curricular in the College of Education and fulfills a psychology elective in the general education curriculum in the College of Arts and Sciences (as described in Simons *et al.*, 2021 & 2011). This course requires a service-learning component in which students complete 15-hours of homework assistance at a public school. Students answer structured reflection questions before, during, and after their service. These questions require students to apply their service experiences to the course content, integrate course readings to support their perspectives, and reflect on their thoughts and feelings about both the service context and the course content. In

addition, the diversity content of the course is integrated into topics covered in the course. Topics covered in this course include measurement theory, racial bias in achievement and aptitude tests, racial-cultural-ethnic identity development and developmental, behavioral, and motivational theories, and diversity in school settings. The outbreak of the COVID-19 pandemic required revisions to the course as shown in Table 1. The educational psychology course was taught synchronous through Zoom video-conferencing software during the COVID-19 pandemic. Course lectures and discussions were revised using a flipped learning approach (Talbert, 2017).

2.3 Measures and Procedure (as described in Simons *et al.*, 2021)
A **Demographic Questionnaire**, developed by the researchers, was used to gather information on gender, race, age, and year in school. Race and participation in service during the outbreak of the COVID-19 pandemic were recoded into two dichotomous variables to denote Students of Color and White students, as well as if students did or did not take the course during the pandemic.

The **Civic Attitudes, Knowledge, and Skills Measures (CAKSM),** developed by Moely and Ilustre (2011), measures constructs related to civic engagement and is based on the Civic Attitudes and Skills Questionnaire (CASQ) (Moely, Mercer, Ilustre, Miron, & McFarland, 2002). The CAKSM is a self-report questionnaire that yields scores on 11 subscales measuring attitudes (i.e., social responsibility, social justice, valuing community engagement, & cultural awareness); knowledge (seeks knowledge about political issues, knowledge of New Orleans culture, & knowledge of current events); and skills (interpersonal problem-solving, leadership, & cultural skills). The civic responsibility (i.e., respondents evaluate their intentions to become involved in community service), social justice (i.e., respondents rate their agreement with items expressing attitudes concerning the causes of poverty and how social problems can be solved), cultural awareness (i.e., respondents assess their interest in learning about different cultures) and skills (i.e., respondents evaluate their ability to relate to people from a different race or culture), interpersonal problem-solving (i.e., respondents evaluate their ability to listen, work cooperatively, take the role of the other, think logically and analytically, and solve problems), and leadership (respondents evaluate their ability to lead) subscales were used in the current study. The coefficient alpha for each subscale ranged from .77 to 78.

The **Color-Blind Racial Attitude Scale (CoBRAS)**, developed by Neville, Lilly, Duran, Lee, and Browne (2000), assesses contemporary racial attitudes. The CoBRAS, a 20-item self-report measure, yields scores on three scales: 1. Unawareness of Racial Privilege (i.e., respondents evaluate their lack of awareness of White racial privilege); 2. Unawareness of Institutional Discrimination (i.e., respondents evaluate their lack of awareness of racial issues associated with social policies, affirmative action, and discrimination); and 3. Unawareness of Blatant Racial Issues (i.e., respondents evaluate their lack of awareness of blatant racial problems in the United States). Cronbach's coefficient alpha for each scale ranged from .86 to .88.

The **Multigroup Ethnic Identity Measure (MEIM),** developed by Phinney (1992), measures two aspects of students' ethnic identity: 1. Ethnic Identity Achievement based on exploration and commitment, and 2. Sense of Belonging to and attitudes toward, one's ethnic group. Cronbach's alpha for this scale is .80.

The **Multicultural Experiences Questionnaire (MEQ),** developed by Narvaez, Endicott, and Hill (2017), measures multicultural attitudes on two subscales: 1. Multicultural Experiences is based on the number of multicultural experiences, and 2. Multicultural Desires is based on effort or desire to increase multicultural experiences. Cronbach's alpha for the subscales ranged from .53 to .73.

The **Psychological Costs of Racism to Whites Scale (PCRW)**, developed by Spanierman and Heppner (2004), measures the costs of racism to Whites as an emotional, cognitive and behavioral consequences experienced by White individuals as a result of racism on three subscales: 1. White Empathetic Reactions Toward Racism (i.e., respondents assess their feelings about racial injustice); 2. White Guilt (i.e., respondents asses the degree to which they feel responsible for racism) and 3. White Fear of Others (i.e., respondents assess how much they trust or distrust people who culturally differ from them). The White empathetic reactions toward racism and White guilt subscales were used in this study. Cronbach's coefficient alpha for each subscale ranged from 63. to .78.

A qualitative-quantitative mixed-methods research design was conducted with a cross-sectional sample of students exposed to ASL in an educational psychology course. Qualitative findings are merged with the quantitative data to understand both the process and the extent to which students shift their colorblind racial attitudes, develop empathy, and demonstrate civic engagement across the semester (Creswell, 2005). Students completed an electronic consent form and a pretest survey that measured the Civic Attitudes, Knowledge and Skills Measures (CAKSM), the Color-blind Attitudes Scale (CoBRAS), the Multigroup Ethnic Identity Measure (MEIM), the Multicultural Experience Questionnaire (MEQ), and the Psychological Costs of Racism to Whites Scale (PCRW) at the beginning of the course. Students completed the survey again at the end of the course. Surveys took approximately 30 minutes to complete. Students also completed critical reflections after each hour of service and a cultural competence assignment. Student assignments were analyzed using a grounded theory approach after final grades were awarded.

3. Results

3.1 Qualitative Analyses

Two sources of information (i.e., cultural competence papers/presentations, critical reflections) underwent an item-level analysis through which thematic patterns were identified and coded using grounded theory techniques (Creswell, 2005). Data from reflections and papers/presentations were compared and analyzed using open, selective, and axial coding procedures to construct a conceptual framework of student learning.

Open coding consisted of categorizing and naming the data according to the theoretical concepts of service-learning (Eyler & Giles, 1999) and educational psychology (Slavin, 2020), while selective coding consisted of systematically analyzing the data using topical codes based on intergroup contact theory (Allport, 1979), cognitive dissonance theory (Festinger, 1957), and Piaget's cognitive-development theory (Wadsworth, 1995). Coders counted the unit of analysis and divided it by the number of student reflections and papers to obtain the percentage for categories that emerged from open coding, as shown in Table 3. Categories and topical codes that emerged from open and selective coding were further compared using the constant comparative method.

Axial coding consisted of analyzing the data according to time. Categories and topical codes were compared across time over the semester. Categories and topical codes were arranged and rearranged until the data was saturated. Major themes that emerged from the data include a mental representation of the course and service, intergroup contact, initial impressions of service as an eye-opening experience, knowledge acquisition, racial-cultural awareness, assimilation and accommodation, color-blind racial attitudes, racial-cultural identity development, and the value added from ASL on career development and opportunities for growth as shown in Figure 1. Career development and opportunities for growth were unexpected themes that emerged from the data. Coders counted the number of responses for each major theme and divided the responses by the number of students to obtain the percentage as shown in Table 4. Finally, the data were cross-checked among coders, and discrepancies were discussed among research team members until 100% agreement was reached.

3.2 Quantitative Analyses

A repeated-measures paired t-tests were conducted to measure differences in diversity and civic outcomes from the beginning to the end of an educational psychology course. As indicated in Table 2, students improved their social justice attitudes, increased their awareness of White privilege and intentions for engaging in multicultural work, and decreased their levels of empathy over the course of the semester.

An exploratory analysis was conducted to identify differences in diversity and civic outcomes for Students of Color and White students. A repeated-measures t-tests were conducted on student post-survey reports. White students ($\bar{x}$ = 34.02) had higher cultural awareness post-test scores t (88) = 1.73, p<.05 compared to Students of Color ($\bar{x}$ = 31.11). White students ($\bar{x}$ = 14.68) similar reported having higher levels of empathetic reactions related to White guilt t (82) = 1.92, p<.05 compared to Students of Color ($\bar{x}$ = 11.88). White students increased their cultural awareness and guilt related to racism by the course end compared to Students of Color.

4. Discussion

Educators propose that students demonstrate civic outcomes through their service activities regardless of the course content or in diversity courses that require students to

think critically about social justice issues (Chenneville *et al.*, 2012). The combination of diversity content with the service-learning pedagogy may deepen students understanding of social justice and civic engagement. Few studies have been specifically designed to evaluate ASL impacts on diversity outcomes in students in a multicultural education course (Baldwin, Buchanan, & Rudisill, 2007; Conner & Erikson, 2017). In fact, most studies either measured pre-post changes in civic outcomes in an ASL course (Collopy *et al.*, 2020) or compared outcomes for students in face-to-face and online instructional modalities (Xiao *et al.*, 2022). Xiao and colleagues (2022) observed no difference in student learning for students exposed to Eservice and in-person service-learning and surmised that Eservice was a viable method for teaching about civic responsibilities. Self-awareness and recognizing racial privilege were also common themes detected in qualitative studies of student learning in ASL courses (Espino & Lee, 2011; Saavedra *et al.*, 2022). Scholars have measured differences in student survey responses and analyzed in-depth reflective writing and journal entries, and although both quantitative and qualitative methods provide insight into student learning before and after participation in ASL, few of them studies have been grounded in a theoretical framework (Conner & Erikson, 2017). The lack of a theoretical framework, the overemphasis on reflective measures, and survey responses gathered from small samples of students in a single course limit the validity of findings and make replication difficult. The use of a mixed-methods research approach grounded in a theoretical framework in the current study addresses methodological limitations in previous studies, increases the reliability of our findings beyond a single course, and expands the scholarship on ASL and diversity outcomes.

The aims of the current study were to measure differences in student diversity and civic outcomes and to conceptualize their learning in an ASL course over the course of the semester. The Educational Psychology course is a designated service-learning course. Students who register for this course are provided with information about the service-learning requirements (i.e., clearances) prior to the actual course. Figure 1 depicts what and how students learn in an educational psychology course over the semester. As shown in Figure 1, in the beginning of the semester, all students had a mental representation of the Educational Psychology course and the service-learning requirement. All students appeared excited or nervous about taking the course and participating in service work, consistent with multicultural education research (Sanchez, Norka, Corbin, & Peteres, 2019; Smolcic & Arends, 2017). One student's comment illustrates sentiments about the course and service, "*I am excited about this course and find the material interesting. However, I am nervous that this course is going to be more complicated and demanding than my other courses. I am also nervous to start at my placement. This is my first service-learning experience, and I do not know what to expect. I have never done anything like this before, and I am unsure of what it means to work with the school psychologist and what I will do to help the students.*" Student expectations of the course and service demonstrate the schema or mental representation concept in Piaget's cognitive-development theory (Wadsworth, 1995).

From the beginning to the middle of the semester, students formed relationships with children at public schools located in community surrounding the University. Student relationships represent intergroup contact (Allport, 1979). Most students made judgments based on their initial observations of the school. One student's comment demonstrates student views of the school, *"This was an eye-opening experience and much different from the schools I went to. I had to go through a metal detector and show my identification to a police officer. Then I had wait 15-minutes at the front desk to meet my assigned teacher. The school was chaotic and unorganized. I wasn't sure what to expect, and my expectations were lowered after observing students running down the hall and security personnel just watching them."* Students compared their own educational experiences to those at their placement sites, which demonstrates the disequilibrium component of the assimilation process, as shown in Piaget's theory (Wadsworth, 1995).

All students formed deeper relationships with the children they were paired with at the school by the middle of the semester. Students gathered information that challenged their perceptions of the children, school, and community and then reformulated their attitudes, consistent with the disequilibrium and accommodation concepts in Piaget's theory (Wadsworth, 1995). One student's comment illustrates intergroup contact effects on assimilation and accommodation, *"I am a Biracial, upper-class male, and the student I am paired with is a Black, middle-class male. I have established a relationship with him, and he has opened my eyes to the differences in the world and the struggles that kids like him in this community go through. The best example I can give is the responsibilities he has compared to when I was his age. My day consisted of school, homework, and playing. His is going to school online, watching his nephew, helping his sister with homework, doing his homework, doing chores, and preparing meals for his siblings. He has ten times more responsibilities than I ever had as a kid. If I was never introduced to this kid, I would never realize the struggles that children go through. Although I help him stay on top of his homework, I have learned more from him then I have taught him. I gained a different view of the children in this community."*

Students completed reflections after each hour of service which was designed to have them connect their service experiences to the course content. All students demonstrated theoretical application in their reflections. One student's notation illustrates knowledge acquisition, *"Service-learning was the best part of the course – the reflections made me think. I made strong connections between the service and learning parts of the course. I could take what I learned in class into the field and practice the concepts in real life. Being able to actively use the class material helped me to understand it."* In addition, students completed a cultural competence assignment in which they had to interview a teacher or guidance counselor using questions that inquired about professional experiences, work with diverse populations, pedagogical or counseling methods, and challenges as a professional. Students worked with other students to make either a video or PowerPoint presentation in which they compared teacher responses and connected them to diversity, motivational, behavioral, and developmental theories. Students summarized what they did or did not learn about diversity, equity, inclusion, and belonging from this

assignment. Almost all students increased their racial-cultural awareness, consistent with previous research (Espino & Lee, 2011; Smolic & Arends, 2017; Wallin-Rischman, Price, Richey, & Carns, 2020). One student's comment illustrates racial-cultural awareness, "*Interviewing the teacher and taking part in service-learning exposed some of the stereotypes I had about urban, Black children. It was eye-opening. I stereotyped this one child as bad at the beginning of my service. I learned that he acts out because he is struggling. I discovered my own bias and worked to change it so I could be more tolerant and avoid stereotyping.*" The combination of service experiences and course assignments challenged students to reformulate their perspectives, congruent with cognitive dissonance (Fesinger, 1957) and cognitive-development (Wadsworth, 1995) theories.

The combination of their service experiences and course assignments further contributed to students' increased levels of racial-cultural identity development and decreased color-blind racial attitudes. Almost all students described their own racial-cultural identity development in their reflections. Two student notations demonstrate racial-cultural-ethnic identity development, "*I am White and seek to change racism. I immerse myself in communities of Color and seek opportunities to build relationships with people from varying cultures and ethnicities. I know I have so much more to learn about racism,*" and "*Although I have explored my own ethnic heritage, I am always striving to further understand my own racial identity. I know and am conscious about what privilege comes with my racial identity. I am committed to learning and understanding ways in which to be anti-racist.*" Slightly more than half of the students also made notations about examining their color-blind racial attitudes. One student's comment illustrates racial color-blind attitudes, "*I had no knowledge about diversity and inclusion until this course. I never thought about being White or what that means. The course and service made me think about this.*" Student development of racial-cultural identity and formation of racial attitudes is consistent with the accommodation concept in Piaget's cognitive-development theory (Wadsworth, 1995).

By the end of the semester, students made notations about the impact of the course on their development. All students made reflections about how their service work impacted their career development, consistent with service-learning research (Eyler & Giles, 1999). One student's comment illustrated career development, "*I am grateful for having this experience before becoming a teacher. I found that I loved being in the classroom and learned that there are little things a teacher can do to make a classroom more inclusive. As a prospective teacher, I need to make sure that my classroom environment, materials, and content are representative and supportive of all races, cultures, and ethnicities.*" All students described service-learning as an added value of the course in terms of reducing their stereotypes and improving their confidence. However, students acknowledged that they need to continue to work on their racial awareness and attitudes beyond the course. Two student comments demonstrate self-growth, "*This course taught me a lot about myself. Not only did I learn that I stereotype people, but I learned I don't know anything about my own culture. Learning about diversity opened my eyes to what the world is really like.*" and "*I grew up in an extremely racist household and had no other education about race and cultures until college. It was a culture shock. Exploring this topic helped me understand who I am and where I came from.*"

The realizations that occurred led to an understanding of my place in the world in relation to other cultures. This realization encouraged me to apologize to the people in my life and explore further information about diversity and discrimination." The critical reflection assignment required students to review their reflections and describe how their perspectives did or did not change over the course of the semester. The self-reflection component in the reflection assignment appears to have contributed to the development of student perspective-taking skills.

The major themes that emerged from the data suggest that students begin the course with perspectives about the course and community and examine them after engaging in relationships with recipients via service activities. The course assignments further require students to connect their service experiences to the course and challenge them to further examine their attitudes (i.e., assimilation & accommodation). Students increase their cultural-racial awareness and levels of racial-cultural-ethnic identity over the course of the semester. In addition, students discussed how the course made them think critically about racism and how they can work towards eliminating discrimination in their roles as teachers in their reflections. Career development and opportunities for self-growth are considered added-values from participation in a service-learning course, congruent with previous research (Eyler & Giles, 1999).

Survey reports similarly revealed that students improve their understanding of social justice issues in the community, increase their awareness of White privilege, levels of ethnic identity, interests in multicultural work, and reduce their levels of empathy from the beginning to the end of the semester, partially consistent with previous research (Reich, LaCaille, Axford, & Slaughter, 2022; Zuccehero & Gibson, 2019) that detected no difference in empathy scores for students who did and did not take part in experiential learning. The empathetic reactions toward racism subscale measures anger, sadness, and helplessness in relation to racism. Spanierman & Heppner (2004) found that increases in racial awareness is related to increases in levels of empathetic reactions in White students. There were no observed differences in empathetic reaction scores between White students and Students of Color. In fact, both White students and Students of Color reduced their feelings of anger, sadness, and helplessness by the end of the semester. The current sample of students engaged in experiential practices. Students specifically inquired about the diversity, equity, inclusion, and belonging practices that the teachers use in their classes for their cultural competence assignment. Most students made comments about using diversity strategies to promote inclusion as prospective teachers in their reflections. Although students increased their racial awareness, it is plausible that students identified practices to change oppressive realities, such as strategies for fostering inclusive classrooms rather than feeling helpless. White students increased their racial awareness and experienced more guilt by the course end compared to Students of Color. This finding is not surprising given that White students tend to experience guilt after engaging in dialogues about racism (Spanierman & Heppner, 2004).

There was consistency between student survey reports and critical reflections. The results from the surveys indicate that students increased their social justice attitudes,

racial awareness (i.e., White privilege), levels of ethnic identity, and interest in multicultural work, consistent with descriptions of their interactions with service recipients and the development of their racial awareness and racial identity development in their critical reflections. Students made notations that illustrated the examination of their racial attitudes and acquisition of perspective-taking skills, although perspective-taking skills were not observed in the survey data. Career development and growth opportunities were detected as unexpected learning outcomes. More research is necessary to understand how ASL impacts professional and personal development. The quantitative data measured with surveys validates qualitative findings measured with reflective writing; while, the qualitative data further extends the results and explains the process for how students learn in an Educational Psychology course.

The infusion of diversity content, pedagogical strategies, intercultural experiences, and interventions (i.e., activities, assignments) are key components for teaching students to think critically about complex social issues and to prepare them for prospective careers that embody the values of civic engagement. The Educational Psychology course included explicit diversity objectives and outcomes, multicultural and social justice perspectives, and dialogues and discussions about race, class, and culture. The cultural competence assignment and service-learning activities were designed so that students could form relationships with service recipients who racially and culturally differed from them. Although service activities were carefully implemented, service alone is not enough to shift student attitudes. Both critical reflection and cultural competence assignments were designed so that students could examine, challenge, and reexamine their own perspectives. The critical reflection assignment also required students to engage in self-reflection and to examine their views over the course of the semester which in turn may have contributed to their cognitive development (i.e., disequilibrium, assimilation & accommodation). Diversity objectives and outcomes, the infusion of diversity content and perspectives, the service-learning pedagogy, and course interventions (assignments, activities) can be integrated into any undergraduate course in an Education or a Liberal Arts Curricula.

The theoretical framework described in this study may also be useful to instructors. It explains how students learn and change their attitudes over the course of the semester, although the framework should be further assessed with diverse samples of students to generalize the results beyond our sample of White females. Additional data is necessary to understand if the proposed framework differs for males, BIPOC students, and transgender students, since these students may have answered questions about racial privilege differently. Researchers may also want to explore differences in diversity and civic outcomes between White students and BIPOC students since differences were observed in levels of cultural awareness and empathetic-guilt, thus suggesting that service impacts BIPOC students differently than White students. The use of randomization, a control group, and mixed quantitative-qualitative methods with a large student sample at different institutions would further expand this area of research, and it would afford researchers the opportunity to assess the theoretical model using rigorous

quantitative methods such as a path analysis or structural equational modeling. This would not only improve the validity and generalizability of the model, but it would also make an interesting study.

5. Conclusion

Multicultural education is a useful framework in an academic service-learning (ASL) course and has the potential to influence the development of student diversity and civic attitudes. The most salient findings from this study were that students increased their social justice and racial attitudes, levels of ethnic identity, and interests in multicultural work over the semester. The use of student surveys and in-depth reflections enhance the consistency of our findings. Student reflections afforded us an opportunity to develop a framework about how students reformulate their diversity attitudes and reaffirm their commitments to social justice through their career plans as prospective teachers.

Conflict of Interest Statement
The authors declare no conflicts of interest.

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Appendix

Table 1: Content, Pedagogy, and Assignments in an Educational Psychology
Course Before, During and After the Outbreak of the COVID-19 Pandemic

Prior to the COVID-19 Pandemic			During and After the COVID-19 Pandemic		
Content	**Pedagogy**	**Assignments**	**Content**	**Pedagogy**	**Assignments**
Educational psychology	Service-learning	Critical reflections	Educational psychology	Eservice or service-learning	Getting-to-know you video
Service-learning	Guest speakers	Cultural competence/ diversity film review paper	Service-learning	Guest speakers	Critical reflections
Educational resilience: risk & protective factors	Small and large group activities	Three examinations	Educational resilience: risk & protective factors	Small and large group activities	Cultural competence/ teacher interview group power point, video, or paper
Instructional objectives and methods of grading Standardized testing Aptitude and achievement tests Test bias Developmental theories Diversity and development: personality, Social-emotional and cognitive Racial/cultural/ethnic identity development	Lecture and discussion		Instructional objectives and methods of grading Standardized testing Aptitude and achievement tests Test interpretation Reliability and validity Test bias Developmental theories Diversity and development: personality, social-emotional and cognitive	Lecture and discussion	Three examinations

Student diversity Behavioral theories of learning Motivational theories of learning Learners with exceptions Effective learning environments			Racial/cultural/ ethnic identity development Student diversity Behavioral theories of learning Motivational theories of learning Learners with exceptions Effective learning environments		

Table 2: Mean Scores, Standard Deviations, and Paired t-Tests for Pre- and Post- test Scores for CAKSM, CoBRAS, MEIM, MEQ, and PCRW

| | Measures | Time Points | | | | | |
| | | Pretest | | Posttest | | | |
		M	SD	M	SD	n	t-test
CAKSM	Civic Responsibility	37.41	4.76	37.57	5.85	80	-.20
	Cultural Awareness	33.30	3.60	33.64	4.34	81	-.53
	Cultural Skills	31.00	4.44	30.53	4.37	82	.68
	Leadership Skills	20.04	3.05	19.12	3.05	81	1.84
	Interpersonal Problem-Solving Skills	43.98	3.95	44.47	6.54	84	-.63
	Social Justice Attitudes	29.74	3.09	33.21	4.77	82	-5.32***
CoBRAS	Racism	10.75	3.60	10.15	3.94	73	.93
	Institutional Discrimination	16.25	4.46	15.32	5.46	70	1.15
	White Privilege	18.39	5.30	14.94	5.96	71	3.33***
MEIM	Ethnic Identity Achievement	16.81	4.25	18.45	3.60	72	-2.71**
	Ethnic Identity Belonging	26.41	5.50	27.01	5.14	72	-.69
MEQ	Multicultural Desires	24.43	2.88	24.91	3.04	73	-.99
	Multicultural Experiences	25.52	4.98	28.50	5.19	70	-3.52***
PCRW	Empathetic Reactions	26.40	3.88	21.90	3.40	70	7.60***
	White Guilt	13.13	4.64	14.11	5.47	72	-1.41

Note: ***p<.001, **p<.01.

Table 3: Open, Selective, and Axial Coding

Categories	Open	%	Selective	Axial
Pre-service Expectations: Students reported a variety of feelings around their expectations for the preservice learning component of this course. These feelings were not mutually exclusive, with some students reporting multiple feelings in their reflection.	Excitement	67%	Perceptions/mental representation	Beginning
	Nervousness	43%		
Course Expectations: Students indicated that they were excited to be able to make a connection between education and psychology through this course. Students noted that this was the first course they had taken that challenged their thinking with regard to race, racism, and bias.	Bloom's taxonomy of learning: integration & synthesis via education	52	Assimilation & accommodation	
	Bloom's taxonomy of learning:	19		

	integration & synthesis via diversity			
Classroom First Impressions: Students described the environment of the school as positive (safe, welcoming, etc. or negative (chaotic, unorganized, etc.). Some students also described the school or program as understaffed.	School culture/climate: School environment as welcoming	48	Intergroup contact	
	Negative	38		
	Understaffed	33		
Experience in the Classroom: Students reported that the teacher used some type of incentive or reward system to motivate students. Students noted that the teacher used a negative reinforcement strategy such as removal from participation, whole class discipline, etc.	Bloom's taxonomy: application Incentive/reward system	62	Formal stage of cognitive development	Beginning-middle
	Negative reinforcement and removal punishment	29		
	Class rules and expectations	19		
Similarities/Differences from Personal Experience: Students noted that the experience was different from their own personal experiences in school. Few students indicated that they were working in the same school they went to, but that it had changed dramatically since they last attended. Students also indicated that this school experience was much more racially diverse than their previous experiences.	Difference	100	Contact Assimilation & accommodation	
	Similarities	5	Assimilation	
	Racial awareness	52	Accommodation	
Risk & Protective Factors: Students described how they could connect their observations of risk and protective factors.	Bloom's taxonomy: application Socioeconomic status/poverty	57%	Formal stage of cognitive development	
	Community/environment	48%		
	Lack of basic needs	33%		
	Violence/crime/drugs	33%		
	Disabilities/diagnosis	24%		
	Lack of role models	10%		
	Attendance concerns	10%		
	Social support	52		
	Community resources	38		
Racial/Cultural Awareness: Students noted gaining racial or cultural awareness from participation in service-learning. Students also described confronting and/or talking about bias and stereotypes and becoming more self-aware. Most students indicated that they had either never talked about race before or had not ever explored with own ethnic identity.	Racial awareness and self-awareness regarding bias and stereotypes	33	Intergroup contact/ Cognitive dissonance	Beginning-middle
	Ethnic identity development	33		

Colorblindness and racial awareness: first time thinking about their race: Student reflections in this section focused on the awareness racial privilege. Main themes in this section focused on the importance of not being colorblind, confronting and/or talking about bias, and becoming more self-aware. Most students indicated that they had either never talked about or explored with own racial privilege.	Color-blindness	57	Intergroup contact/ Cognitive dissonance	Middle
Relationships: Students described the importance of relationships and belonging; building strong, trusting relationships with students as an important factor in a positive school environment.	DEI	100	Intergroup contact	
School Experiences: Students discussed their own school experience and how this played into their choice to become an educator.	Positive experience	45	Assimilation & accommodation	
	Negative experience	10		
Diversity I: Students described their hometown and school experiences was diversity, or more specifically, the lack thereof. Students noted that they felt their school experience had been whitewashed.	Lived school experience/lack of diversity	60	Assimilation & accommodation	
	Whitewashed school experience	15		
	Lived experience	25		
Diversity II: Students discussed diversity in two ways: with regard to race/ethnicity and with regard to diversity as it relates to education.	Lack of diversity at the school at their placement site.	52	Assimilation & accommodation	Middle-end
	Diverse perspectives in curriculum/culturally-sensitive teaching	81		
Value added: Students unanimously indicated that they felt that the service-learning component of the course brought value and was worthwhile, and it provided an opportunity to bring theory and practice together in the real world.	ASL was worthwhile experience	100	Accommodation	End
	Served as extra-help in the classroom	52		
	Served as a role model	38		
	Learned about themselves	67		
	Blooms' taxonomy: application	52		
Opportunities for Learning and Growth: Students discussed what they learned and what they will take with them into their future work. Students noted that this activity caused them to reflect on their experiences or take a deeper look at who they are as individuals.	Growth mindset	75	Accommodation	
	Career	55		
	Cultural competencies	30		

Personal Development: Students reported that they had learned something new or grown as an individual in one way or another. Students felt that the journal assignment brought value to the course and caused them to reflect more on their learning.	Critical thinking or perspective taking	100	High-ordered or abstract thinking Accommodation	
Professional Development: Students discussed how service-learning confirmed their career choice. Other students realized that being a teacher is not a career for them.	Career choice	57	Accommodation	

Table 4: Major Themes of Student Learning in an Educational Psychology Course

Time	Major Themes	Examples	%
Beginning of the semester	Perceptions/mental Representation of course and service	Students appeared excited and nervousness. I am excited about this course and find the material interesting. I am also nervous that this course is going to be more complicated and demanding that my other courses. Although I am excited, I am also nervous to start at this placement. This is my first service-learning experience, and I do not know what to expect of Chester High School. I have never done anything like this before, and I am unsure of what it means to work with the school psychologist and what I will do to help. However, I am still very excited to start! I am excited to start at the school. I am going into this experience with an open-mind. I am nervous about working with students.	100
	Intergroup contact	This was an eye-opening experience; school did not appear organized. I had to wait for 15-minutes at the front desk workers could not locate my teacher. My first impression was that the school was slightly chaotic and busy, and the students needed to be monitored. I also thought that there was probably a reason as to why this school had metal detectors when people first walk in with a police officer's supervision.	86
Beginning and middle of the semester	Intergroup contact/ Relationships	I connected with the children and the teachers; the children and teachers differed from me. I learned about their different backgrounds. The students are from backgrounds that differ from my own. I have learned how to relate to the students and build relationships with them. Connecting with students is key so I can teach them and ensure their cultures are represented in the classroom. I learned how to build relationships with the children. I am thankful every day for getting paired up with the kid I tutor now. Because I have learned more from him then I have taught him I believe. He truly opened my eyes to the differences in the world and the struggles that these kids in this community go through. The best example I can give is the responsibilities he has compared to when I was his age. My day consisted of school, homework, and playing. His is going through school online, watching his nephew, helping his sister with homework, doing his homework, doing chores, and make food for his siblings. He has ten times more responsibilities than I ever had as a kid. If I was never introduced to this kid, I would never realize the struggles that children go through and now I can see the cycle that they get stuck in. They all get stuck in this cycle because teachers and parents are too busy to help them and keep them on track usually. If I wasn't tutoring these kids, I think he would be stuck in the cycle, but I help him stay on top of his homework and not get sucked into the dangers and bad things that happen in this community.	100

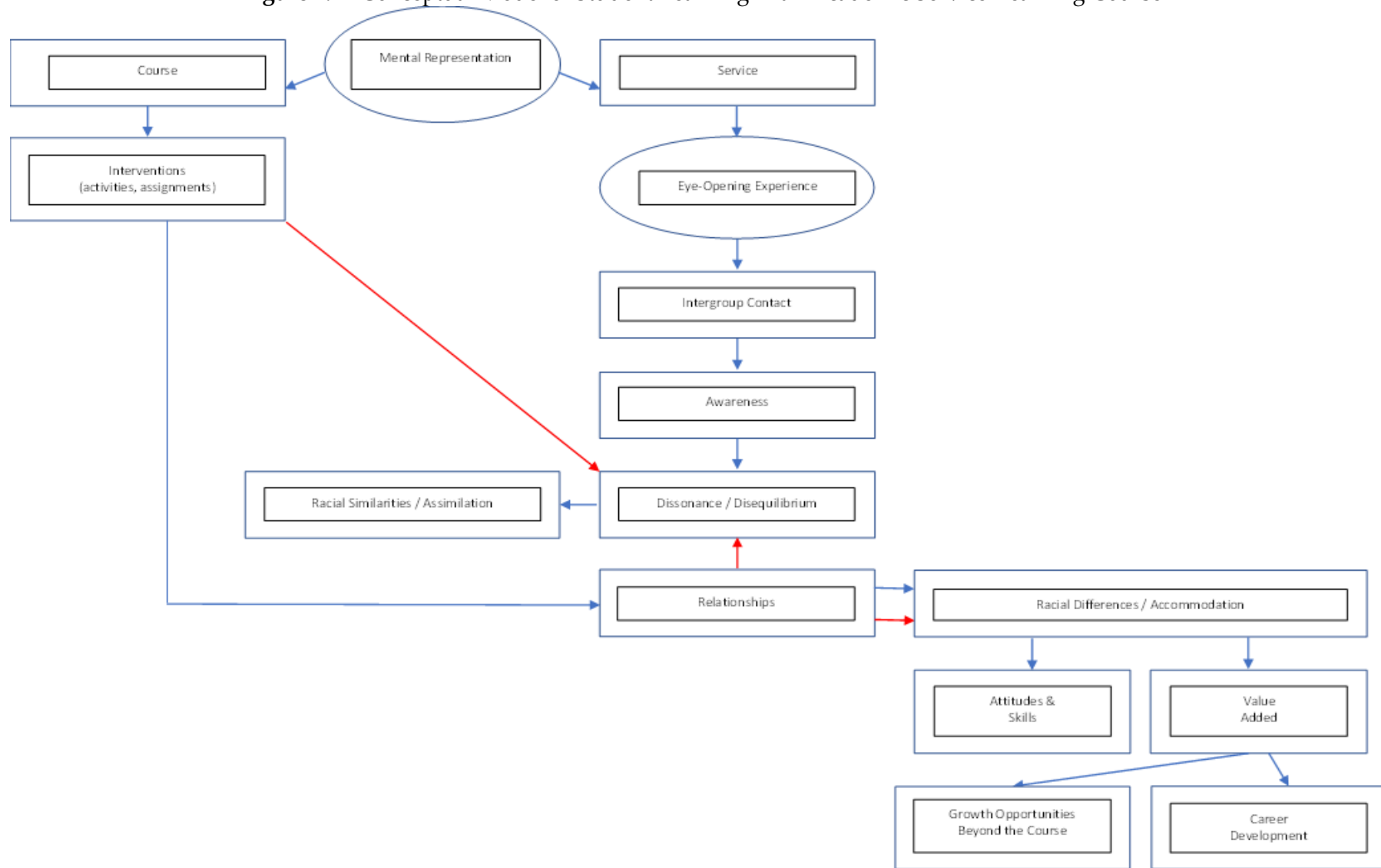|			
Middle of the semester	Blooms taxonomy-application	I have noticed that some of the children are dropped off late to school and are not given breakfast in the morning. The children are hungry and have a hard time paying attention in class. This example demonstrates Maslow's theory. I see risk factors at my placement. The children come from low socio-economic environments, attend neighborhood schools and there are few resources in the neighborhood and at school. I worked with a child who lost their brother to gun violence. I can't wrap my head around how these children function with all the challenges and with little resources.	100
		I made strong connections between the service and learning parts of the course. I could take what I learned in class into the field and practice the concepts in real life. Being able to actively use the class material helped me to understand and apply it. I observed Vygotsky's zone of proximal development when the teacher reviews the content with the children and then sends them off on their stations. The teacher used a reward system for good behavior. The rewards served as a positive reinforcer in Operant Condition and Extrinsic Motivational Theories.	91
Middle of the semester	Racial-cultural awareness	Taking part in service-learning exposed some of the stereotypes I had about urban, Black children. This experience was eye-opening. I realized how ignorant and bias I am and that I need to work on this. I was able to reduce my stereotyping; I stereotyped this once child as bad at the beginning of my service. I learned that he acts out because he is struggling; I learned about myself, my own internal biases and how to correct them. I had to be tolerant and avoid stereotyping. I had a little six-year-old Mexican boy who spoke Spanish and English. He was the best reader I had come across in this program. If I had stereotyped him, like some of his teachers, I would not have challenged him to read books above his grade level. Most of his teachers saw he spoke Spanish as his first language and thought he was not as intelligent as he is. I am going to be completely honest I went into this just thinking he doesn't want to do homework because he's from Chester and he is just going to be a bad kid. But after being with him I realized no one in Chester is a bad kid - they are neglected kids and they lack motivation to succeed which causes for them to act out and be on their own. They have no direction, and this is also what made me fall in love because I wanted to be that guide for him.	90
	Racial similarities & differences/ Assimilation & accommodation	The teacher is Black and most children in class are Black. The children are behind in their levels of learning for their grade. The school is in Chester and does not have resources. This is very different from my own experiences. Most students were obsessed with my hair. The students would touch it because it was different from their own. At my school, staff had to show their IDs but there wasn't any form of security. My school was mostly White and the school I am placed in is mostly Black. My placement school is different. I have to go through security to get into the building. Fights break out in the always and there are multiple suspensions. At my elementary school, it was rare if fights or suspensions happened. The high school that I went to was predominantly White and everyone came from similar homes and socioeconomic backgrounds. Additionally, I have not travelled to many different places. In fact, I have only been to a handful of states, and never outside of the country. So, I have not had the ability to experience cultures and lifestyles that are different from mine. Also, because I have been in the same school district my whole life, I have always been surrounded by people who are similar to me. Now that I am in college, I have had the experience of being around people who are very different from me regarding their background, ethnicity, sexual orientations, and many other diverse factors. Because of this, I have enjoyed my time in a different environment because I have learned so much more about people from different states and different belief systems than I had. I am now around people who did not come from the same area as me, which made me realize how much of an impact diversity has on the world.	100

Middle of the semester	Color-blindness attitudes	I had no knowledge about diversity and inclusion. Now that I have had experiences at different community programs and schools, I understand that the importance of fostering an inclusive classroom. Diversity is an essential piece of teaching. I believe by being in a diverse classroom, students benefit from learning about each other's culture. I would even overhear conversations about two friends' skin tones being different, or the children used words like White, Black, Asian, Mixed, etc. Though we know they are not "color-blind", they see, appreciate, and accept each other's racial identities. They are not judged for them- no matter what race they are. As a future educator, and a white Woman, I think it is very important to never be "color-blind". While it showed me the various benefits of the career, it also showed me the more serious, upsetting qualities of it. For example, Ms. Berry said that it can be hard to listen to the various issues that young students face on the daily. Also, the incident off campus was extremely eye-opening regarding what it is like to work in a school. It gave me a reality check of potential things that could unfortunately happen when I would be dealing with children.	57
	Racial-cultural-ethnic identity attitudes	Although I know I have privileges because I'm White, I have Biracial and Black family members and I still struggle to understand why Whites have more privileges than every other racial group. I am White and seek to change racism. I want to be part of the Chester community, immerse myself in communities of Color, and seek opportunities to build relationships with people from varying cultures and ethnicities. I know I have so much more to learn about racism. I continually work on myself so I can be more inclusive. I have educated myself both in the classroom and outside of it the have gained a clear understanding and positive connections to my personal racial identity. Not only have I explored my own ethnic heritage, but I have also looked to educate myself further on those ethnic heritages of others. I have also created an identity from my heritage. I respect the uniqueness of all individuals and actively seek to pursue social justice and social change. I am always striving to further understand others' racial identity and my own. I know and am conscious about what privilege comes with my racial identity. I also have been committed to learning and understanding ways in which to be anti-racist. Throughout this process I feel that I have been raw and real with myself in furthering my education and confronting any potential unconscious biases, stereotypes, etc.	90
End of semester	Cultural competence in personal and professional development	This past year one of my teammates who is African American overheard some of our other teammates using racial slurs when singing a song. She brought this to our attention and how uncomfortable she felt. She spoke to our team and in doing so it brought her to tears. This young woman was so put back at how her friends, teammates and mentors could play alongside her while also being racist. This was my first personal encounter with an issue to this magnitude and was a very eye-opening experience for me. Though I had nothing to do with the issue at hand or was the cause of how she felt I couldn't help but feel so angry for her. I knew from that point on I needed to do everything in my power to educate others. Typically, if someone is singing a song that used a racial term, I would mind my business but since the incident I have overstepped multiple times to ensure this issue doesn't have the same impact on another person.	30
		Most teachers are White but most of the children are Black in the school. The teacher had books that reflected the children's race, culture, and religion. I read the books to the children in small groups and learned that there are little things a teacher can do to make a classroom more inclusive. Children learn differently. As a prospective teacher, I need to make sure that my classroom environment, materials, and content are representative and supportive of all races, cultures, and ethnicities. Children learn best when they can relate to the content, so I must know my students so that I can integrate learning into their lives.	81

	Value-added	I know realize that reflecting on my service made me make connections to my own experiences in school and the course; SL helped me get out of deficit mindset. I learned all children want to and can learn no where they are from; This opportunity has shaped me in so many ways, it improved my leadership skills, reduced my stereotyping, and my tolerance to children. I feel more confident in myself as a leader /educator, I feel stronger, and I really feel the impact I am making on young lives. Without service learning this course would feel empty, or significantly less useful.	100
	Career development	I feel more confident. I believe I am a better person and more prepared to be a teacher after this course. I am grateful for having this experience before becoming a real teacher; I found that I loved being in the classroom. I enjoyed going and being with the students. I learned a lot from the teachers I got to watch and am excited to take a few of these tricks they taught me into my own classroom; It also reinforced my certainty in the fact that I want to be a school psychologist in the future. I realized that I enjoy helping the children that are sad, or helping the children resolve conflicts. I still believe that working with children is what I am meant to do, and I am grateful that I had this opportunity to figure this out; I love the idea of being a role model to them and being a guide to kids on how to get through this messy and challenging life; I know I want to work with children for a career.	100
	Cognitive dissonance & opportunities for self-growth	This course taught me a lot about myself. Not only did I learn that I stereotype people, but I learned I don't know anything about my own culture. Learning about diversity opened my eyes to what the world is really like. I grew up in an extremely racist household and had no other education about race and cultures until college. It was a culture shock when I realized how many things, I've said are disrespectful. My father believes that everyone is human and has equal opportunities. To this day, I still have anxiety when talking about different ethnicities and cultures, because I feel like I'm fighting my own views against the topics I was taught as a child. Looking at how I spent my junior year in my AP language class, I had no idea what my culture was, other than White people being privileged. I realized the resources that are available to me because of my social class and ethnicity. Exploring this topic helped me understand who I am and where I came from. The realizations that occurred led to an understanding of my place in the world in relation to other cultures. This is actually the realization that encouraged me to apologize to the people in my life I've made comments to, and explore further information about diversity and discrimination.	100

Figure 1: A Conceptual Model of Student Learning in an Academic Service-Learning Course