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A comparison of HBCU students' academic performance and perceptions of course modalities: Face-to-face vs. hybrid vs. online

Leona M. Johnson, Ph.D., Novell E. Tani, Ph.D., & Jermaine T. Robertson, Ph.D.

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A comparison of HBCU students' academic performance and perceptions of course modalities: Face-to-face vs. hybrid vs. online

Abstract

This study examined students' perceptions of learning based on course modalities. Two hundred-two (202) students at a Historically Black College and University (HBCU) in the southwestern region of the United States participated in the study. The results confirmed the following: Course format proved to be positively associated with expected course outcomes (r = .34, p< .01). Mean comparisons using ANOVA models revealed significant differences in grade expectations between students in the online (M = 84.05, SD = 10.31), hybrid (M = 79.76, SD = 9.21), and face-to-face (M = 89.49, SD = 8.17), courses; F(2,199)= 23.99, p < .001. Students proved to hold higher amounts of negative course perceptions for online (M = 23.4, SD = 9.68) and hybrid courses (M = 23.04, SD = 9.94) in comparison to face-to-face courses (M = 14.84, SD = 9.62; F(2,199) = 17.01; p <.001).Course format proved to be a significant predictor of negative course perceptions (F(1,200) = 28.71, p < .001). These findings yield important implications for instructional and institutional consideration.

Introduction

For over a century, HBCUs, account for only three percent of the nation's colleges and universities, lead the efforts of educating African American college students who excel in their fields (U. S. Department of Education, 2016). There is a sparse amount of research outlining the differences in outcomes (e.g., student performance), benefits (e.g., accessibility), and students' perceptions of course modalities when considering course formats offered at HBCUs. Only recently has there been a focus on face-to-face vs. distance-learning at Historically Black Colleges and Universities (Graham, 2019);however, these analyses focus almost primarily on the instructors' views. It is equally vital to understand how students' perceptions of these course modalities may lend themselves to students' subsequent academic performance. Further, the integration of online technologies in educational practices renders new opportunities for teaching and learning (Scagnoli et al., 2009).

Through this study, we expanded the work of Bandara & Wijekularathna (2017), offering a novel approach to examining HBCU students' perceptions of course format. We analyze how learning in face-to-face vs. hybrid vs. online modalities converge to improve the learning environment for students at an HBCU, particularly taking into consideration students' perceptions of course modalities. We examine: 1) the relationships between students' academic performance, perceptions of course modalities, and instructional format(s)experienced; 2) the differences in academic performance as gauged by self-reported GPA when considering course format and students' perceptions of course modalities, and 3) the differences in students' perceptions of the learning environment when considering course modalities.

Literature Review

Very little research exists surrounding HBCU students' perceptions of learning in distance-learning and face-to-face courses. According to an earlier study focused on

non-HBCU students, comparing a graduate online course with an equivalent face-to-face course,students in the traditional course held slightly more positive perceptions about the instructor and overall course quality, although the two courses formats mirrored one another in several key measures of learning outcomes (Johnson et al., 2000). Haywood and Murty's (2018) assessment of HBCU students in online psychology classes indicates that, with the exception of peer-networking and support, students proved to be "very satisfied" with all course-related elements. Other research confirmed that students preferred face-to-face instruction to the hybrid modality. For example, Wright and Holmberg-Wright (2018) make note that although more students are taking online courses, there is a preference for traditional face-to-face instruction rather than hybrid learning. In addition, researchersconfirm that students favor the face-to-face environment (Fish & Snodgrass, 2016;Weldy, 2018). Overall, Fish and Snodgrass (2016) posit that as institutions continue to integrate online education into their curricula, research on students' perceptions of the value of online versus face-to-face courses has produced mixed results. Platt, Raile and Yu (2014) found that, overall, students did not perceive online and face-to-face classes to be equivalent; however, previous exposure to online classes was positively associated with perceptions of general equivalence, comparative flexibility, comparative knowledge gained, and comparative level of interaction in online versus face-to-face classes.

Relative to performance in course formats, Bettinger and colleagues (2014) note that, on average, students performed worst in online courses, compared to how they would have performed in a traditional, in-person class setting. Marquis and Ghosh (2017) provide evidence of negligible differences in student performance between those in blended learning and traditional face-to-face learning environments. This is most notable as the researchers assessed perceptions when considering similar student performance outcomes; again, the students showed a preference for the hybrid design.

More recent research findings indicate that the success of all students declines as they take a great proportion of their course load online (Hamann et al., 2020). Reuter (2009) found no significant differences in students' course grades between online distance education students and students in the traditional course face-to-face course. Additionally, Flowers et al. (2014) revealed similar grade distributions regardless of the course delivery method. Carrol and Burke (2010) also confirm that students' academic achievement, course engagement, and scholastic effectiveness did not differ pending face-to-face or online modality.

Overall, differences in students' learning outcomes between those in online and face-to-face classroom are inconclusive (Wright & Holmberg-Wright, 2018). While colleges across the nation are expanding their online courses offerings, more research is needed, especially as pertains to HBCU students, surrounding the effects of traditional versus remote courses, students' perceptions of varying course modalities, and students' academic success.

Methodology

Procedures

Professors within the Department of Psychology teaching sections of Human Growth and Development (DEP2004) or Introduction to Psychology (PSY2012) were provided a link to the self-report survey; then, students were sent invitations informing them of the opportunity to participate in the study. The study link was posted on their respective

learning management system websites (blackboard); thus, allowing potential participants to complete the study at their leisure. Pending the instructors' preference, student participants completed the study survey for course credit, extra credit, or voluntarily. The web-link directed participants to the online study, developed using the Qualtrics assessment and surveying software. We captured this pilot data within the first two months of the fall 2019 semester; students were allowed to complete assessment metrics in one sitting.

Participants

Using convenient sampling techniques, we pooled respondents who attended a public HBCU in the southwestern region of the United States. The study relied on data from *n* = 202 students (39 = Male; 163 = Female). Students were in face-to-face (*n* = 130), hybrid (*n* = 50), or online (*n* = 22) courses in Introduction to Psychology or Human Growth and Development courses. The self-reported GPA of participants ranged from 0.5 to 4.0, *m* = 2.94 (*SD* = 60). The bulk of the participants (roughly 40%) self-identified as sophomores (*n* = 80), the sample included 42 freshmen (21%), 45 juniors (22%), 32 seniors (16%), and only three (3) graduate students.

Measures

The online survey and assessment, henceforth referred to as the Student Perception of Course Modality (SPCM) Scale, included demographic questions, a section gauging pervious experiences with courses of various formats, and a specific section tailored to capture students' perceptions of the individual course enrolled versus those of other modalities.

Demographic information. The demographic questionnaire was relevant to the present study for the collection of self-reported information on participants' age, gender, racial and ethnic self-identification, classification, major, and cumulative grade point average. While the utilization of self-reported GPA may be considered a typical methodological limitation, extant literature notes relatively high accuracy in respondent-provided GPA and official grade point averages provided by institutions (Caskie et al., 2014; Sticca et al., 2017).

Past Course Modality Experiences. To assess students' previous experiences with online, hybrid, and traditional courses, we developed twenty-seven general items posed to all participants. First, participants responded to three items that assessed "*face-to-face course experience*" and "*online [or hybrid] course experience*" by selecting from provided answer choices: [(I have taken only face-to-face courses (0), I have taken mostly/primarily face-to-face courses (1), Roughly half of my courses have been face-to-face (2), Less than half of the courses I've taken have been face-to-face (3), Less than 25% of the courses I've completed have been face-to-face (4) (*M* =.73, *SD* = .61) – or – (I have not taken any online (or hybrid) classes (0), I have taken one-two online (or hybrid) classes (1), I have taken three-four online (or hybrid) classes (2), I have taken five or more online (or hybrid) classes (3), (*M* =.97, *SD* = .91 and *M* =.53, *SD* = .71) respectively]. Here, students with more diverse collegiate-course experience(s) would obtain a maximum of 10 points (e.g., those with only traditional/face-to-face course experience would receive a score of 0; *M* =2.23, *SD* = 1.61). Next, participants responded to sixteen (16) Likert-type questions, aimed at assessing students' general perceptions of the three course modality types (participants select responses ranging between Strongly agree, Somewhat agree, Neither agree nor

disagree, Somewhat disagree, and Strongly disagree). These questions include variations of items such as "*Face-to-face (hybrid/online) classes help my progression towards graduation due to the flexibility in scheduling (i.e., course time and location offerings)*," "*Hybrid courses are more challenging than face-to-face or fully-online courses*," and "*Online courses feel impersonal in terms of student-student interactions*." Finally, using the same Likert-type responses, participants answered eight (8) questions that compared the three course modalities on a range of vital elements (i.e., "*In the following (face-to-face/online/hybrid), I am best able to succeed due to outside course resources*," "*In the following course modalities, I feel there is more classroom engagement*," and "*It is difficult to "prepare for class" when the course is offered in the following modality*").

Perception of Current Course Modality. Following the sections noted above, participants completed twenty-five (25) questions on their perceptions of a current face-to-face, online, or hybrid course (either DEP2004 or PSY2012 pending students' enrollment). First, we asked students to provide the grade they anticipated receiving in the specific course. Next, we posed a series of questions to capture students' perceptions of the course (i.e., "*Given the course format, the description of the assignments (i.e., assignment layouts, labeling of materials, and blackboard modules) was acceptable*"; "*The course information (e.g., PowerPoints, lecture materials, announcements, etc.) was readily available";* "*This online course required more energy or effort from me than it would have if the course were a hybrid or face-to-face course*"; and "*I am confident that I would have obtained the same grade if the course was a hybrid course*"). The 5-point, Likert-items, again, ranging from Strongly agree to Strongly disagree, were coded such that more favorable responses that indicate positive perceptions were weighted as five (5) while lower ratings were rated as one (1).

Statistical Analyses

IBM SPSS Statistics Software version 26 was utilized to complete the analyses. To examine associations between variables (RQ1), we utilized Pearson's zero-ordered correlations. To determine if differences existed in anticipated grade (RQ2) based on students' course type, we ran several t-tests and ANOVA models. Likewise, to examine the final research aim (RQ3), we constructed ANOVA models and a stepwise regression-analysis model to a) determine if students proved to hold higher amounts of negative course perceptions when considering the course modality experienced, and b) examine the extent that modalities and other elements captured serve as significant predictors of students' perceptions observed.

Results

The results of the study follow based on the presented research questions:

RQ1) What associations prove to exist between students'past academic performance, anticipated course performance, perceptions of course modalities, and past enrollment experiences with the three course modalities (e.g., 0-10) indicating no to greater enrollment online and hybrid courses)? Correlational analyses reveal positive associations between students' self-reported GPA and expected course grades (r = .41, p< .01). Similar to the findings presented by Hamann and colleagues (2020) students with greater experiences with hybrid and online enrollment (course format experiences) expected lower grades in the course of record (r = -.20, p < .01).

Students with higher grade expectations proved to hold lower amounts of negative course perceptions (r = -.21, p< .01).

RQ2) What differences are observed in anticipated academic performance when considering course modality and students' perceptions of course modalities. Students' self-reported GPA did not differ based on course format [online (M = 2.84, SD = .53); hybrid (M = 2.89, SD = .44); and face-to-face (M = 2.9, SD = .66); F(2,199)= .63; p >.05]; however, mean comparisons using ANOVA models revealed significant differences in grade expectations between students in the online (M = 84.05, SD = 10.31), hybrid (M = 79.76, SD = 9.21), and face-to-face (M = 89.49, SD = 8.17), courses; F(2,199)= 23.99, p < .001. Course format proved to account for 11.3% of the variance observed in expected grades (p < .001); subsequently, negative course expectations proved to account for 4.4% (p< .001) of variance in expected course grades.

RQ3) What differences exist in students' perceptions of the learning environment when considering course modality, and to what extent do modalities account for variances in students' perceptions. Students in the online and hybrid courses proved to hold higher amounts of negative course perceptions (M = 23.4, SD = 9.68 and M = 23.04, SD = 9.94; respectively) in comparison to those in face-to-face courses (M = 14.84, SD = 9.62; F(2,199) = 17.01; p <.001. Moreover, the course format factor proved to be a significant predictor of negative course perceptions(F(1,200)= 28.71, p < .001); accounting for roughly 12.5% of variance observed in negative course perceptions. As indicated by beta values (β=-5.39), students in the face-to-face courses held lower amounts of negative course perceptions than those in the hybrid and online courses. Overall, the findings are in line with the existing literature on the comparisons on academic achievement and comparisons of course modality.

Discussion

The results of this study are important as they augment the literature on HBCU students' academic performance and their perceptions of course modalities. These initial results provide insight into the important associations between student course perceptions and the grade they anticipate receiving. While the students were at similar proficiency levels outside of the courses assessed (given self-reported GPAs), those holding more adverse or negative course perceptions believed they would receive a lower grade. Students in the face-to-face courses anticipated receiving higher grades and held significantly lower amounts of adverse perceptions about the course format. Interestingly, those in the hybrid courses held adverse perceptions that mirrored the online students' perceptions; however, students in the hybrid course anticipated significantly lower end-of-term grades.

While these are important outcomes, we also understand that other factors outside the purview of this study (i.e., major alignment, academic engagement, interest in course subject matter, etc.) may impact students' overall course perceptions. A delimitation of the present study is that we use convenient sampling at one HBCU, thus the findings may not necessarily be generalizable to other demographics or students enrolled at other institutional types (i.e., Primarily White Institutions, Minority Serving Institutions, or Hispanic Serving Institutions).

While regression analyses results indicate course format as more influential of expected course grade than negative course perceptions (F(2,199) = 13.84, p < .001), this trend

may differ in coming years as the educational landscape may shift. Student enrollment in online and remote courses may change, due to elements outside of their control, such as COVID-19; so, it is likely that collegiate students' exposure and experiences in hybrid and online courses may differ since the collection of the present study data. While results indicate that those in the face-to-face courses tend to expect higher grades and hold higher perceptions of the modality, as student become more accustomed to remote learning, this finding may likely change. We provide a general narrative as it relates to students' perceptions of course modalities and its relation and contributions towards students' academic outcomes; however, more work is needed to further investigate the minutia relative to the topic at hand. Due to the dearth of research in this area, future inquiry should focus on differences in HBCU students' perceptions of course modalities before, during, and following the COVID-19 health pandemic.

In summary, our findings support other work which suggests that HBCU students' perceptions, specifically perceptions of rigor, prove to impact students' academic performance (Tani& Ray, 2018); while our results corroborate this, we extend on past work by highlight the overall importance of course modalitiesafforded to students. These findings also help us to understand the importance of students' perceptions towards a class, above and beyond their initial abilities, and how these perceptions influence academic performance. Educators and administrators should take care when considering the types of learning formats provided to students and consider how students' perceptions relate to and contribute to students' subsequent academic successes.

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Anthropological Study of Autism Special Education Classrooms

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Introduction

A number of educational research projects have focused on inclusion of autistic children (Karten 2008; Ochs et al. 2001; Shyman 2013), literacy (Kluth and Chandler-Olcott 2008), interaction with helper animals (Solomon 2015), use of imaginative play (Park 2008), and location and set-up of the autism classroom (McAllister and Sloan 2016; McAllister and Maguire 2012a; 2012b; (How to Set Up an Autism Classroom 2021).

According to Solomon (2010:252), "Further examination of how institutionalized structures of power and processes of representation intersect and shape the lives of individuals with autism and their families across settings is needed." Ochs and Solomon (2010:70) suggest that in order to understand autism we need to understand "relationships with people and material objects and the role of cultural and situational context in achieving joint attention, attunement, intersubjectivity, and social coordination of feelings and actions." It has also been stated that the classroom itself represents a culture or cultural activity, and that it is important to put the classroom into context (Gallimore 1996). By looking at the everyday practices in the ASD (autism spectrum disorder) classroom we will be able to see the lived experience of the children, families, and teachers (Cascio 2014; Cascio 2015; Solomon and Bagatell 2010).

It not uncommon to see case studies in the anthropological literature or those with only individual classrooms involved (Ochs and Solomon 2012; Tan and Eyal 2014). Ethnographic participant observation is a primary method in cultural studies. This entails watching and participating in the usual activities of the population under study. Data from participant observation aids in interpreting "institutions, actions, images, utterances, events, customs and the usual objects" (Geertz 1983:22).

The current project focused on the autism classroom, a small part of the larger educational institution, in hopes of better understanding how the autism classroom functions, and how spaces are created (Fein 2015) and negotiated (Block 2015).The intention was to explore the intersection between the institution, teacher, child and family observed within the autism classroom. According to Lawlor (2010) it is our responsibility as anthropologists to "illuminate these often complex, crafted social worlds," as in the research presented here. An applied anthropology perspective was used as the foundation for the research; to observe the situation and offer solutions or support to the community involved. Therefore, the goal of this research was to provide the schools and classrooms, the social structures of power (Lawlor 2010), with a list of best practices to best serve the community needs.

Methods

The methods were developed to be carried out by students in an anthropology ethnographic field methods course. By employing student observers there was potential to expand observations to include more classrooms and move away from the single classroom or case study approach. The research students carried out ASD classroom participant observation, mapping of classrooms to compare set-ups (including fixed physical structures and location/availability of other materials), and interviews of parents, teachers and aides associated with these classrooms. There were a total of 6 student researchers that observed the classrooms for two hours a day for 2-4 days per week over the course of 4 weeks. The number of days per week were based on the research student credit hours. In total there were 8 classrooms observed in the

Greater Grand Rapids area. Seven ISDs were contacted, including 43 school districts. Of those, only 5 districts consented and of those 8 classrooms agreed to participate. In order to achieve the number of classrooms necessary to meet the research student's credit hour requirements we ended up offering dollars per hour for the timethe anthropology students observed the ASD classes.

In the ASD classrooms all data was written in hand-held notebooks, although maps were drawn on separate sheets of gridded paper. No ASD student, teacher, aide, or parent's names were identified nor information that may have been used to identify particular individuals. No recordings, visual or auditory, were made in the ASD classrooms. Interviews were recorded and later transcribed by the research students, see Table 1 for questions asked of parents, teachers, and aides. Participant observation and data were coded using key words related to the goals of the project. The researchwas approved through the Grand Valley State University, Human Subjects Review Board (IRB).

Results

Basic demographics show a total of 44 students, 8 teachers, and 21 aides/paraprofessionals who were active in the eight observed classrooms. Classrooms were represented from kindergarten to sixth grade and high school with a greater number of students in higher grade levels. Some classrooms had less than 1:1 staff-to-student ratios while other classes had students outnumbering staff 4:1.

There did not appear to be set curriculum, each student had their own learning plan. Life skills were frequently practiced including, learning to shake hands, cooking, and checking the weather.

Both negative and positive reinforcements were applied. Reinforcements for appropriate behaviors were used in all of the classrooms. Smileys were the most used reinforcement, in some cases accumulating them to be exchanged for a reward. One example of a negative reinforcement was taking away a student's Chromebook privileges for the day because the student was off task. Conversely the same teacher reinforced good behavior with an ice cream sandwich as a reward when a student did well on an exam. Overall, there were more similarities between the classes than there were differences regarding use of reinforcements.

It was observed that there were two types of breaks for the students: scheduled and unscheduled. Unscheduled breaks were used as a coping mechanism, students were encouraged to take breaks as needed, i.e. if a student was experiencing sensory overload. One teacher stated that they would rather have a child spend thirty minutes on a break than disrupt the class or have behaviors escalate. Thus, the unscheduled breaks helped both the individual student and the class as a whole. During scheduled breaks students were often observed staring off into space or were complaining about being bored. Teachers would then have to prompt the students to do some type of activity during the break.

Most interactions were between teachers and students and aides/paraprofessionals and students. In some cases, adults other than the teacher interacted more with the students one-on-one than the teachers did. It was also noted that the amount of interactions total for each classroom varied significantly. In every classroom, student to student interaction occurred, although it happened in some classrooms more than others. This is important because students in ASD classrooms are often thought of as unsocial, but even this small data set shows otherwise.

All but 1 classroom had at least 1 piece of sensory equipment, although all 7 observed for this characteristic had loose furnishings. One classroom had a separate room for sensory needs. Three classrooms used safe spots when dealing with escalating behaviors. One classroom had a computer for each child while others had a single computer. All of the rooms had individual work spaces for the children. Six of the 8 rooms observed for seating showed purpose specific seating. For all 5 classrooms observed for wall décor, 40-50% used posters on available wall space.Two classrooms had their own bathrooms and two had working kitchens to practice life skills.

The number of windows ranged from 1 to 6 per classroom. Two classrooms had all of the windows covered, 2 had half of the windows covered and 3 were observed with windows open at all times. Four of 8 classrooms had one door while one classroom had 6 doors. One classroom had all open storage, 1 had all closed storage and the rest had approximately half open/closed storage. Five classrooms had overhead lighting on at all times, 2 classrooms covered the lights in light blue fabric, and 3 used only half the light available in the room.

Parent interviews

Parents responded to the questions, "Do you want your child to participate in Gen Ed? Is this desire being met?" with 77.78% stating they wanted their child to participate in the Gen Ed classroomwhile 22.22% did not want their child to participate in Gen Ed. Only 42.86% of parents who wanted their child to participate in Gen Ed reported having had this desire met while all parents that did not want their child in Gen Ed had their desires met.One parent stated,

> "Um, we didn't really understand a lot of it so it was probably last school year that I kind of started to try to learn more and put my foot in as a parent more and this year I really tried to stand up for [my child] and just what we really believe what [my child] is capable of versus what we think [my child] is getting versus what [my child] is being given. And-and just all around we just weren't really…We're seeing more and more dissatisfaction."

No parents were given information regarding research supporting the therapeutic or educational approach used in the classroom to help the child learn.

All parents stated that they understood the IEP process. However, 77 % of the parents mentioned some type of negative experience with an IEP.One parent said,

> "I know that it's a long process and it takes a lot to get certain things approved. Um, with that said, it kind of gets frustrating when you realize that, you know, if say a teacher doesn't really help you out when you're trying to get feedback or figure out where they're at in the process, it makes it hard to come up with a definitive IEP schedule for them, and I've had that happen recently actually, you know we had to get ahold of the school and try to figure out where we are at in the IEP and you know, sometimes they wouldn't help us that much, they would just keep it where it's at and wouldn't be kind of progression."

A range of methods to communicate between teachers and parents included, calls, emails, texts, and sheets that were sent home. Overall, parents said the best way to stay informed about their student was emailing. Other parental comments on communication included the desire for more frequency or consistency or that they did not hear from the Gen Ed teacher.

Only 33% of parents responded yes when asked if information on local resources were made available to them through the school system. Two parents stated that you had to know people in order to find any of those references on your own.One parent shared a positive experience,

> "Well, [The teacher] puts out a thing for the, um, … group…and that, so, [The teacher's] been really good about putting out the resources and that kind of stuff. Um, [my child] and I have actually been in outside therapy for, since she was probably two and a half years old, so as far as that kind, I don't know if any of that was given through the school or not, but, um, I've had teachers ask me about the therapists that my kids go to so that they can pass that on to other parents, so I think if there's a need the parent, um, the teachers do find those resources or give them, you know, ideas of where to go to find the other resources."

Another parent shared a wish for more resources,

> "Um, there isn't a whole lot. That needs to greatly increase. There is the autism community, um, that has a once a month potluck. And um, where information can be retrieved there, you know, various people, but there's not a whole lot in the community, which is a real shame."

Regarding having their children in therapy 4 of 9 parents stated their children were in ABA. Three parents said that their child had done therapy but were not currently in a program. One wanted therapy and another simply stated no to the question. One parent talked about the therapy in school not being enough,

> "OT, occupational therapy as well as speech therapy. Um, it's not enough in my opinion because, um, it's mostly done as a group in the classroom or as a consult through the teacher and in my opinion, it's just my opinion, for what it's worth, is that each one of these boys needs individual speech and occupational therapy."

Another parent mentioned difficulty placing the child in therapy,

> "Um, yes! We just started ABA therapy about two months ago, and the reason that he is eleven years old and we are just starting it is because my insurance didn't cover it, and it finally just started covering it."

Only 2 of 9 parents stated that they had been offered assistance for childcare or transportation in order to attend the IEP meetings.

Seventy-one percent of parents related that they worked with their child at home on topics covered in the IEP. One parent shares their experience,

> "We work – everything [my child] brings home we work on. Um, most of the time it will take us an hour to two hours a night to do [my child's] homework." "We do it every night. [My child] gets really mad at me 'cause then the night [my child] doesn't have homework [my child] is like, 'Yes!' but then I'll turn around and give [my child] something."

Three of 9 parents said they had been connected to other families in their child's classroom for purposes of mutual support. A parent responding no said,

> "Um, no. And honestly when the kids were younger the school tried more to do some of that kind of stuff, but it's tough. Families are so different and just because you have a child with autism doesn't mean things are the same. So, I've tried it in the past and I don't know that I find it beneficial I guess."

A parent who responded yes stated,

> "The, yes, the teacher that we have, which is of course her last day, um, has gone out of her way. She would have, like, a monthly parent luncheon, um, once a month where we would be invited when she would have her lunch break to a local, quick, lunch in town. So, um, she really understood the fact that you can't have these meetings at the school."

Seven of 9 parents said that they had not been offered training about special education. One of these parents said that a social worker at the doctor's office gave them resources but they got so much information back that they were overwhelmed. Another parent that had been offered training said that it was similar to ABA but it pushed together autism, ADHD, and ADD.

None of the parents interviewed had been given any information on the research supporting the techniques used in the classroom to help their child learn. Forty-four percent of the parents mentioned seeking out knowledge on their own regarding ABA knowing this to be a successful approach. One parent mentioned this information would be appreciated,

> "I have not, no. Um, I would love to have that type of information."

Of the 5 parents that answered the question, "Are you provided with information in your native language?" they all stated yes.

TeacherInterviews

The teachers interviewed range from finishing up their first year of experience to over thirty-six years in special education.Regarding formal education teachers had a range of endorsements as follows: 45% cognitive impairment endorsement, 18% autism endorsement, 18% learning disability endorsement, 36% master's degree. Eighty-seven percent of teachers in the study who specified where they were educated attended college in Michigan.

Forty-five percent of teachers mention ABA therapy as having been suggested in their own education, 18.18% of teachers mention START and 18.18% of teachers mention DTT. One teacher talked about the many different approaches and therapies,

> "Um, a lot of what we were taught was based on a lot of structure, a lot of things based on behavior, behaviorism, Skinner's, you know a lot of that idea. Where, a lot of, um, positive reinforcements, systems, and things of that nature. Um, we had programming for things like ABA and Discrete Trial Training that actually were done out of the classroom, there were a lot of resources even provided by school districts where you could have therapists come out and do a lot of, um, ABA and DTT type training trials. In the school setting we did a little more of what you might consider informal. Um, and a lot of it again has just been based on behavioristic type of, um, ideas. Here in Michigan I would say that we do follow the Grand Valley the START project, a lot of, um, trainings and, um, different methodology that, um, they have set up."

When asked, "How are non-normative behaviors are dealt with?" 54.54% of teachers mentioned that it depends on the behavior or that there are many different ways to deal with many different behaviors. Thirty-six percent of teachers mentioned a behavioral plan they would refer to while 27.27% of teachers

mentioned breaks as a way to respond to non-normative behaviors. Only 18.18% of teachers mentioned CPI holds in their answer to this question.

Teachers said "some" or gave a range between 0 and 4.5hours for the length of time per day that students spent in the Gen Ed classroom. Four teachers stated the children spent under 1 hour per week in Gen Ed, 3 stated between 1-2 hours in Gen Ed, and 3 had students in Ge Ed up to 4.5 hours weekly. Additionally, one teacher said, "as much as possible" and another said, "it depends."

In response to the question, "Is there anything that you want or need to improve your ability to teach your students?" 70% of teachers who responded with a need chose something intangible, while 20% chose more staff, and only 10% chose a tangible item. Here is an example of a teacher requesting something tangible for the classroom,

> "Well, my, uh, we had a couple of fundraisers, and my intent is – two different things, I want to create a listening station where, I was gonna get disk players but I'm thinking I'm gonna go with IP – something a little more sturdy, but where kids can listen to music with headphones, so, to kind of create a more calming atmosphere within the classroom, um my goal for this year is to look at the sensory piece of this classroom. So, I was trying to look at some things we could do in both calming and movement. And, I had, um, written a grant, but that one didn't go through, um, there's a kind of glitch in it and I was asking for a Wii so that we could do things like the Wii bowling, and the Wii, um, Just Dance, and those kinda things to a) kind of promote sensory, um, and b) to kind of promote, um, social interactions, cause those are tough for our students."

Another example of a teacher responding with a wish for something intangible,

> "Part of my frustration has been, um, the feeling that there's a lack of understanding from an administrative point of view. That, um, our-our needs, although, um, they've tried to be very supportive. I don't wanna say that but I don't think [pause] one of the things I've tried and tried and tried to impress upon the administration is please get to know these boys. Please come. Please be a part. You can't just drop in once a month for 15 minutes and then, um, feel like they're gonna know you. And, like you know them in order to make administrative decision, you know? So, please I invite you, I want you to be a part of this. And that has never happened. Even with our direct supervisor, you know, who's supervisor of the program."

Approximately 82% of teachers responded to the question, "Are there experiences that you have had where you learned certain methods did not work?", by mentioning that they have experienced certain methods not working because so many students are vastly different. This teacher's response captures the majority of teacher responses,

> "Always! Always! You know, and it's like I said at the beginning. It's student based. This one is going to work with this student and this one is not going to work with this student. So, it just depends on the student and sometimes it just depends on the day. Sometimes, there's days where nothing is working and we have to scrap it all and start over. Some days we're pleasantly surprised that things that we didn't expect to work did!"

AideInterviews

When asked, "How long have you been teaching in an autism classroom? Or other special education classroom?" aides interviewed responded from being in their first year of experience to twenty-nine years of experience in an ASD classroom. Ten percent of the aides mentioned they had worked in non-ASD Special Education classrooms too.

In answer to the question, "Was there a particular therapy or method of assisting that was suggested?" the interviewed aides had a number of different responses; some of them corresponded to their teacher's methods of teaching, while some did not. Overall, more teachers mentioned specific methods or trainings than aides did. Here, one of the aides mentioned specific methods,

> "We did a lot of ABA at first and we use the STAR program now, which is, kind of a version of ABA, just a little bit different, and, um, that was basically it. We did a lot of ABA and then it was a lot of trial and error. Different things work for different kids."

Another aide mentioned a more relaxed approach,

> "Not really suggested, they show me the types that they use throughout the, before I got here, and so I just kind of follow suit and try to go along with what they were already teaching."

In answer to the question, "Where were you educated to work with autistic children?" 31.58% of aides reported doing ISD Training, the other 68.42% of aids reported only on-the-job training. Approximately 16% of aides mentioned having a higher education degree.

There were a number of different responses given regarding the question, "How are non-normative behaviors dealt with?" positive reinforcement being the most frequently mentioned as shown in Table 2. One teacher's response was,

> "Well, I mean, you wanna do everything in your power to not get to the physical restraints. So, whatever's gonna calm, you know, we move out of the way, or they go to their quiet spot, um, you know a lot of people see it as 'well you're rewarding his bad behavior' and it's like, well, we're trying to get him to calm down and then redirect him into appropriate behavior….So, you know, I mean, there are times where you have to have a physical restraint because of the harm to someone else or themselves. But uh, that's always the last resort."

Two aides said students spent less than 1 hour in Gen Ed per week, 9 stated the children were in Gen Ed between 1-3 hours per week, and 2 more said that their students were in Gen Ed up to 4 hours per week.

In answer to the question, "Is there anything that you want or need to improve your ability to teach your students?" 78.95% of aides responded more education or training would be useful, 2 said patience, 2 good relationships, 1 wanted opportunities to do community-based activities and another wanted more sensory equipment.

When asked the question, "Are there experiences that you have had where you learned certain methods did not work?" 94.74% of aides responded yes to the question. Sixty-three percent of aides responded that different methods are needed because all of the students are different; one individual said taking things away from the students does not work, another said "don't yell," and 2 others said that CPI holds don't always work and can escalate a situation.Here an aid responded no saying,

> "Me personally, no, but I have noticed in other situations where things may not have worked the way someone thought that they were supposed to. So yeah, I could see that happening, but me personally, I have always had someone there who has guided me and shown me the correct way to do something."

Discussion and Conclusions

Anoteworthy finding from the participant observation was that the students with autism talk to each other at a ratio of 1:5, compared with teacher student interaction. As autism is considered a social communication disorder it is interesting that within the classroom they are talking with their counterparts. This is part of their culture often seems glossed over in the focus on a plethora of other issues. Ochs and Solomon (2010) have described "Autistic Sociality," the different ways in which individuals with autism interact within normative social context. Although, they also give examples of individuals with autism being social by using objects of joint attention and sitting side-by-side instead of the more normative face-to-face structure. Using techniques like these can help create more meaningful context, and aid in expansion of the social connections already occurring.

Most parents interviewed did not understand how to work within the educational institution and felt they were not having their children's needs met. The majority of parents want their children in the Gen Ed classroom but students were not spending much time there. Studies have shown that mainstreaming children with autism is important but the "how to" remains an issue for many Gen Ed and Special Ed teachers (Stocks 2010).

Over ¾ of the teachers and aides are female serving male students. In the future, research needs to be carried out to determine if these sex differences shape the classroom experience. In the studied populationmost boys are limited to female role models in the classroom. It is ironic that all of the student researchers were also female.

The current study elicited data that show scheduled breaks resulted in boredom and student driven breaks were more effective in dealing with undesirable behaviors and sensory issues. Additionally, student

driven breaks created opportunities for students to practice making life choice decisions. When teachers gave students the choice to take a break the students learned a coping skill and how to be autonomous.

Only 18% of teachers had an autism endorsement and 75% of the aides desired more training. Studies in Virginia (Hendricks 2007), Mississippi (Stocks 2010), and Tennessee (Brock et al. 2017) have shown that additional training/professional development are needed to instruct autistic children in the Special Ed and Gen Ed classroom; application of evidence-based techniques and administrative support are also essential. Jackson (2021) further states that it is necessary to have teachers and administrators work together to develop a shared district or campus wide culture on training and development. Teachers are key in the academic success of their students and collaboration among teachers supports higher levels of success for students (Berry 2010).

Place itself is an important aspect of human culture; classrooms distinguished as autism only place children in them outside of the normal, regular, majority social structure. If we want to move toward a more inclusive environment making changes to the built environment could be a good place to start. For children with ASD,sensory issues can stand in the way of their ability to make progress in school. Suggested changes include use of blue, natural or indirect lighting rather than classrooms lit by bright florescent lights. To reduce distraction classrooms should have few doors and windows, desks should be turned away from windows or have window coverings, and storage should be concealed or overall clutter reduced. Sensory overload from loud noises could be decreased by using carpet in classrooms and hallways, and by installing sound proofing around gyms, music rooms, and cafeterias (How to Set Up an Autism Classroom 2021). Pause for one moment to think about these attributes. Would these changes reduce stress for individuals not on the spectrum?

On the other hand, McAllister and Sloan (2015) propose that students be taught how to navigate different spaces to learn how to deal with sensory issues as they will encounter them in life beyond the classroom. It would require use of aids such as good signage, safe spaces, and time to learn how to adjust to different spaces within the school setting. This opposing perspective has been introduced to open a discussion on the topic of classroom set-up and the built environment. Another opposing study by Pence et al. (2019) where 4 students were observed using blue lighting and traditional lighting showed no improvement in task related or stereotyped behaviors. However, 4 is not a sufficient sample size to make broad statements regarding the inefficiency of blue light.

Ill-defined accountability for autistic students and their classrooms creates a space out of place, within the school but outside of the greater social institution. The institution in our country where children learn the community's rules, history and values of social order. In the absence of inclusion the institution is teaching societal values of isolation. Placement of autistic students in Gen Ed classrooms is necessary to teach the values of inclusion and diversity; difference together.

In conclusion, suggested best practices based on the data collected in this study would include, 1) more training/professional development for teachers and aides specific to the autism classroom (to be determined by a district or campus based community of educators), 2) student driven breaks, 3) creation of classrooms that incorporate appropriate physical features shown to reduce student sensory overload, 4) regular integration into the Gen Ed classrooms, 5) regular communication between teachers and family, 6) and of course an increase in available resources (i.e. more funding). This project represents a relatively small amount of data and due to space restrictions not all topics were fully discussed. However, this is an exciting step forward in our community's search for knowledge on a topic that touches on an increasing number of lives.

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Parent Interview Questions

How is information communicated between the parent(s) and teacher(s)?
Are local resources (or information about them) made available through the school system?
Does your child go to therapy? Which type? How long?

Do you want your child to participate in the General Education classroom? Is this desire being met?
Do you understand the IEP process?
Have you been offered assistance regarding transportation or childcare in order to attend the IEP meetings?
Do you work with your child at home on the topics suggested by the IEP?
Have you been connected to other families in your child's classroom, for the purpose of mutual support?
Have you been offered training about special education?
Are you given information regarding research that supports the approach used in the classroom to help the child learn?
Are you provided with information in your native language?

Teacher Interview Questions
How long have you been teaching in an autism classroom? Or other special education classroom?
Where were you educated for autism and more generally special education?
Was there a particular therapy or method of teaching that was suggested? How are non-normative behaviors dealt with?
How much time do children spend in the general education classroom?
Is there anything that you want or need to improve your ability to teach your students? Are there experiences that you have had where you learned certain methods did not work?

Aide/Paraprofessional Interview Data
How long have you been assisting in an autism classroom? Or other special education classroom?
Where were you educated for autism and more generally special education?
Was there a particular therapy or method of assisting that was suggested?
How are non-normative behaviors dealt with?
How much time do children spend in the general education classroom?
Is there anything that you want or need to improve your ability to assist your students?
Are there experiences that you have had where you learned certain methods did not work?

Table 1. Interview Questions for Parents, Teachers and Aides.

Breaks	3	Physical restraint/last resort	1
Ignore	3	Peer models	1
Patience	1	Safe spot	2
Visuals	2	Positive reinforcement	5
Timers	1	Gentle	1
Behavior Plan/FBA	3	Hit Mr. T	1
Repetition	1	Redirecting behavior	2
Depends	5	NCI	1
Team	1	Schedule	1
Calming	2	Correct behaviors	1
Sensory	1	Time out	1

Table 2. Aide Interview Responses to the Question, “How are non-normative behaviors dealt with?”

Visions of Victory: A Literature Survey on the Meaning of Military Victory

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The literature on the topic of victory in war is full of pithy observations that attempt to capture the complexity of the topic. "Victory has many fathers, but defeat only one" (JFK). "There is no substitute for victory" (McArthur)."To subdue the enemy without fighting is the acme of skill" (Sun Tzu). "Another such victory and we are lost" (Pyhrrus). To paraphrase Mark Twain, one might say victory is rather like the weather…everyone talks about it, but no one does anything about it. That is, we take for granted the seeming obviousness of the meaning of victory in war. Victory is victory and defeat is defeat. War is a simple dichotomy that produces winners and losers. Victory in war is always good, defeat always bad. Just as the word "war" connotes chaos (deriving from the Anglo-Saxon word wers, meaning to "confuse or mix up"), it should not surprise us that the term victory has complicated resonances. A survey of the literature on the meaning of victory suggests how problematic certitude surrounding this topic is.

Military historians such as Brian Bond remind us of how slippery the concept of victory can be. Bond notes in his survey on the topic, The Pursuit of Victory, that "all students of history must be struck by the ambivalence, irony, or transience of most victories."[1]Sparta's hard-won victory over Athens in the Peloponnesian war was quickly reversed as Spartan hegemony in the ancient Greek world soon disappeared. The American Revolutionary War set the stage for the American Civil War. World War One "victors" such as Great Britain and France were gravely weakened by the conflict. Even World War II produced for the victors only a temporary respite before the onset of a potentially even more destructive Cold War that threatened nuclear holocaust at any moment.To a great extent, war and military victory are cultural constructs.

As Bond and other military historians note, the modern states system put in place after the Peace of Westphalia (1648) has made it even harder in modern history for decisive wars to be won. Modern technology, population growth, industrialization, conscription, and nationalist ideologies have made victory harder to attain and defeat harder to admit. Statesemen have always faced the thorny issue of not only having to end conflicts decisively, but to persuade the enemy that he is beaten and must accept defeat. This has become more difficult in modern times with the advent of mass politics. In ancient and medieval warfare, a small elite under imperial or monarchical authority could make decisions on war and peace without reference to the will of their people. After the industrial and democratic revolutions of the modern age, this ability all but disappeared.

Gordon Martel notes in his magisterial commentary Victory in War that "what is missing…is a typology of victory."[2] Countless books have been written on the causes of war, but little thought has been given to war-termination and victory in war.[3] Martel notes that we don't have a systematic theory or literature of victory. Clausewitz notes in On War that "it is a want in our own terminology" that we don't have a precise definition of military victory.

A key issue of course has to do with what type of victory we are talking about. Are we discussing victory in a particular battle or victory in the larger war? As the ancient historian Polybius puts it, it is of course a "good thing to conquer on the field of battle…it needs greater wisdom and greater skill to make use of [such] victory."[4] Martel observes that ancient military history sources don't focus much on the topic of grand strategic victory. Rather, ancient and medieval military leaders often fought battles to enhance their reputations rather than for larger lasting political purposes. War was common, acceptable, and often good for its own sake irrespective of its larger implications.[5]

Of course, any serious consideration on the meaning of military victory ultimately leads us to consider the relevant views of the greatest military thinkers of all time, Carl von Clausewitz and Sun Tzu. According to Clausewitz, "every age had its own kind of war, its own limiting conditions and its own

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[1]Brian Bond, Pursuit of Victory (Clarendon, 1998), 1.
[2]Gordon Martel, Victory in War (Cambridge, 2011), 3.
[3]Robert Mandel, Meaning of Victory (Lynne Rienner, 1983), 5.
[4] Quoted in Martel, 20.
[5] Martel, 22.

peculiar preconception. Each period, therefore, would have held to its own theory of war."[6] This suggests that we must think of victory in military history as something to be historicized, or seen as being defined differently according to what era or period of history we are talking about. Rather than the concept of victory being considered a "constant" in history, victory has to be seen as a product of a given culture's time-bound values and preoccupations. The work of the great military historian Hans Delbruck suggest that no unified theory of war or victory exists that applies to all historical periods.

We can at least start to define our terms. One can speak of a tactical level of victory in which a particular battle of a larger waris won. But the battle itself does not produce an opportunity for lasting victory unless it is part of a successful operational campaign. In turn, operational military victory itself does not guarantee a political victory unless a successful peace is achievedwith one's enemy at the strategic level.[7] Even at this grand strategic level (military victory leading to the achievement of one's aims as ratified in a successful peace settlement), one still has to differentiate among limited and comprehensive victories. For example, the U.S. arguably won a limited victory in the Korean War, but not a comprehensive victory as North Korea continued to exist as a state within the borders it occupied before the war began. The Korean War also illustrates the fact that wars don't often end clearly with a definite victor.[8]

A paradox running throughout the literature on military victory is that "states rarely finish wars for the same reasons they start them."[9] The North in the American Civil War did not at first fight the South to end slavery. That war aim came later as the conflict escalated. Another paradox we face is that subjectivity, perceptual blinders, and ideology often obscure who the "real" winner of a conflict is.[10] Was the Vietnam War a complete defeat for the U.S. or, according to some scholars, was it a kind of victory in a larger Cold War with the U.S.S.R. that stopped the spread of communism throughout all of Southeast Asia? Who gets to determine the consensus view on who wins a war? Does judgment of victory depend on the passage of time? On who is judging the issue?

International relations scholars argue that one constant of recordedhistory is the fact that all states exist in an anarchical international system. This means that as there is no overarching world government that can enforce peace, states have to prepare to go to war with other states in case diplomacy fails. Thus war has been traditionally understood as the ultima ratio regis. Further, each international system has its own values and formal and informal laws of war that legitimate certain victories and delegitimate others.[11] A Carthaginian peace may have been legitimate in the ancient world's Mediterranean state system, but would not be so in today's western-dominated world system.[12]

Three hundred eleven wars were fought between 1480 and 1970, but only one hundred thirty seven of them were concluded with a treaty that ratified or legitimate a victorious state.[13] War in an anarchical international system may be inevitable, but clear winners and losers are not. War indeed has other purposes than the simple pursuit of victory. Early modern European monarchs understood that even indecisive wars were useful in helping them to consolidate monarchical authority at the expense of feudal rivals. That states generally overestimate war's payoff and their ability to prevail at acceptable costs in armed conflict further complicates the value of military victory. Adding to military victory's paradoxical logic, easy victories often lead directly to hard defeats. Prussia's defeat of France in 1871 led to German overconfidence in World War One. America's victory in World War II helped prepare the way for the disaster in Vietnam. The literature on the meaning of victory in military history is indeed replete with the

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[6] Quoted in Martel, 33.

[7] Lord Hankey: "First aim in war is to win, the second to prevent defeat, the third to shorten it, and fourth – and most important – is to make a just and durable peace" (quoted in Mandel, 5).

[8] Martel, 300.

[9] Mandel, 5.

[10] Mandel, 9.

[11] We can use the example of Russia's recent annexation of the Crimea during the Obama administration.

[12] Mandel, 35.

[13] Mandel, 41.

dire consequences of "victory disease." Even a series of limited victories can lead to hubris which caused calamity. Japan's easy victories in the Pacific in 1941-2 were followed by the nemesis of American revenge.

Much of the literature on victory in war overlaps with the topic of war termination, or the study of how decision-makers decide when and how to end a war. Stephen Cimbala in his study Conflict Termination and Military Strategystates that "few major wars are begun with plausible conflict termination stories."[14]But it is precisely such "war termination" stories that can determine if success in military operations will yield victory or defeat. Should Germany's enemies in World War One have continued the war in order to occupy Germany so as to convince the German people that they were definitively defeated? By not occupying Germany, the anti-German powers arguably gave up any chance of ensuring a lasting victory. The approach to victory and war termination short of victory is further complicated by the influence of previous wars on the minds of decision-makers. France fought a war of attrition against Germany in World War One and was determined to do the same thing against Germany in World War Two.

As Cimbala and other observers understand, nations don't have permanent allies, but they do have permanent interests. One would think that nations would approach war with the most serious preparation. A nation should rank its national interests and objectives, identify relevant threats, and develop national strategies to meet such threats. But history is replete with nations bumbling into war and then being surprised at how difficult victory is to achieve. Napoleon III's French Empire was wholly unprepared for war with Germany in 1870. Emotions rather than strategic thinking dictated the country's approach to the Franco-Prussian war. Clausewitz's warning that war should not be an act of senseless passion is often ignored. But is this surprising? War by its very nature must be about passion and partake of the irrational. No wonder that getting into a war, fighting a war, and then struggling to terminate the war in the hope of achieving victory are so fraught with non-rational considerations and uncertain outcomes. Even Clausewitz recognized that precisely since war is an act of force, emotion can't fail to be involved.[15]

A further complication is that politicians who pursue war and victory have an inherent interest in being vague about war aims and goals. Such vagueness allows the decision-maker room to maneuver in case the real objectives prove to be impossible to reach. Lincoln may very well have hoped that the Civil War would end slavery in the South, but at the beginning of the conflict he could not state this as a goal. On the other hand, a failure to state a clear goal or definition of victory at the outset of war can send mixed signals to the enemy. American aims in the Korean War appeared ambiguous to the enemy. Was America hoping to stop the North Koreans from conquering the South and restoring the status quo ante-bellum at the 38thParallel? Or were they - per the comments of General MacArthur – interested in ending the North Korean regime and even carrying the war into China?

Another paradox involved in the pursuit of victory is that war and its successful completion often have more to do with morale and the moral high ground that simple physical force. As Napoleon once said, "the moral is to the physical as three is to one." The center of gravity in a military campaign is not necessarily a military target, but the ideological and moral center of the enemy effort. America in Vietnam may never have lost a major battle, but it utterly failed to achieve victory because it was never able to destroy the enemy's will to resist; a will to resist based on nationalism and anti-colonialism. The North finally won the American Civil War by coming to define the struggle as a war against slavery midway through the war. Victory would have been much more elusive for the North had Lincoln adhered to his original war aims.

How do we decide who has won a war? As the excellent book Failing to Win points out, "often people end up evaluating outcomes on the basis of factors that are largely independent of the battlefield."[16] It is often not a question of who "really won the war" that matters, but how victory is

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[14]Stephen Cimbala, Conflict Termination and Military Strategy (Westview Press, 1987), 3

[15]Cimbala, 185.

[16]Dominic Johnson, Failing to Win (Harvard, 2006), 5.

perceived. Within any given international system, pre-existing beliefs, symbols, and values will shape attitudes toward the definition of a winner or loser in a given war. The British evacuation at Dunkirk in 1940 came to be seen as a victory for Churchill and his people even though in a strict military sense the whole episode was a disaster. Many Germans believed after World War One that they had in fact won the war. After all, the country was not occupied and even the left-leaning German leader Ebert stated to returning German soldiers: "I salute you who return unvanquished from the field of battle." Military struggles are as much about wars of perception as they are about physical clashes. He who better shapes perceptions and expectations about conflict has a better chance of being seen as the winner of a war in the long-term.[17] As Maharbal said to Hannibal, "you know how to win victories, but you don't know how to use them."

The paradoxical logic of victory stems, of course, from the paradoxical logic of war itself. As points out in his fascinating book Paradoxes of War, there is often a lack of a straightforward connection between causes and outcomes in war. For example, a nation may enter a war hoping for increased status, wealth, and power in the short-term. But such narrow cost-benefit thinking ignores that war might be irrational in when considering the medium- to long-term implications. For example, the extra territory gained in a war might prove to be worth less than expected. Israel gained a stunning victory in 1967 but also gained as fruits of the victory territories that it could neither swallow nor give up. Israel in this war lost the benefit of being seen as David and instead became just another Goliath. "Winning less to gain more" might be a better philosophy according to[18] Life can even be more difficult for war's winner than for the defeated. A victorious nation has to take on the burden of protecting its gains in the aftermath of war, while the loser may find defeat to be a positive outcome. Here we can speak of the "phoenix factor" whereby "defeat in war can cause major improvement in a nation's social and political system that could not have been accomplished without defeat."[19] Germany and Japan after World War Two illustrate this phenomenon well. Both nations were able to escape despotic governments, leapfrog past America by adopting a modernized economic base, find a new sense of purpose and unity in the rebuilding effort, and gain sympathy and copious aid from their former enemy.

In addition, preparing for war is costly. *Si vispacem, para bellum* we are told (if you want peace, prepare for war). However, this linear logic misses the point that relations between states is a dynamic affair. When one nation prepares for war, other nations respond accordingly. Preparing for war may produce the very instability a country seeks to avoid in the first place. Capabilities for war and not nebulous intentions shape other nations' responses to military buildups. Victory disease is always with us. Having won glorious military victories in the past may make us determined to solve future problems with military force at the expense of more peaceful solutions.

Thinking about the paradoxes of war and military victory helps remind us that we risk losing control precisely when we think we are in full control. Smart leaders can make the worst decision precisely because they believe they have rational mastery of the war process while forgetting that war is dynamic affair. "Actors can never know what kind of surprise is going to be sprung on them when they start a war."[20] These paradoxes even suggest to Boaz that there is "serious doubt on the instrumentality of war in forwarding national goals."[21] War may be inevitable given the fundamentally anarchical structure of international politics. But hoping that military victory will redeem war's costs is often a will o' the wisp.

If war is too important to be left to the generals, peace is too important to be left to the politicians. The lack of communication between military and civilian authorities often leads to military victory being turned into a failed peace. The French military thought it had won the war in Algeria only to see its

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[17]Johnson, 289.
[18]Johnson, 273.
[19]ZeevMaoz, Paradoxes of War (Unwin Hyman, 1990), 248.
[20]Maoz, 314.
[21]Maoz, 313.

victory lost at the peace table by the French civilian leadership. The process of terminating wars is always a delicate process, requiring much bargaining between civil and military authorities.

The stakes have also risen in war over time. In early modern Europe, war could be started and ended by the will of a small elite. War was fought for limited ends. Leaders in 18th century Europe had an incentive to seek limited victories in order not to destabilize the European aristocratic social order.

This all changed in the twentieth century as war became total. The pursuit of total victory and unconditional surrender of the enemy raised the stakes of war and the pursuit of victory. In total war, there are ways of conquering that quickly transform victory into defeat. Hitler found this out when he missed his chance for victory in Russia by mistreating the population and giving it no choice but to remain loyal to Stalin. Beginning with the Cold War, the idea that the purpose of war was to pursue victory itself came into doubt. Now, a successful war against a nuclear-armed power could lead to the all-out exchange of nuclear weapons. As a note in a Cold War-era briefing room in the U.S. State Department stated, "in a nuclear age nations must make war as porcupines make love."[22]

Alger's fascinating study Quest for Victory argues that the eternal principles of war are not quite so eternal. They were created at a certain time and place for certain purposes. As we shall see this suggeststhat the meaning of victory changes over time as well.

Though the principles of war and the meaning of victory change over time, Reiter in How Wars End suggests that most conflicts throughout time tend to be reducible to bargaining situations. Since "uncertainty about power and intentions of states pervades the international system at any given time, states can't make binding commitments to each other."[23] It is precisely this uncertainty (along with the unenforceability of international agreements) that causes war. War exists in this analysis to reduce ambiguity by producing a clear victor and a changed international system that reflects a new balance of power. The purpose of war and military victory then is to provide information and clarify power hierarchies in a given international system. As Clausewitz notes, "in war the result is never final." Power distributions change over time and new hierarchies arise through war and subsequent victories that signal new power relations in an ever-changing world order.

If war and peace are two distinct states, then victories that lead to war termination are the bridge between them. As the noted international historian Jack Levy points out, "in any system the leading actors essentially define the context for others as well as for themselves."[24] International law – or custom –at any given time is shaped by the dominant power and its culture. This is important as how victory is defined and legitimated depends on a specific constellation of power and cultural relations that define an era. For example, in the international system today dominated by the U.S. and western culture, human and individual rights are protected in the law of war and international law in general. However, were China to become the new hegemon in world politics, human and individual rights would not be so recognized and protected. This is important for our topic since what counts as legitimate ways of waging war and achieving victory will differ depending on the era we are talking about. As U.S. power wanes today, we can see how what is considered legitimate state behavior on the world stage is changing. Russia took Crimea by force against all the norms of current international law in 2014 without serious pushback. We can imagine China taking Taiwan in the near future without serious resistance from the West. These examples might well signify a major change in how war and victory are perceived in the future. A new international system dominated by powers such as China and Russia will legitimate their military conquests and particular cultural values while de-legitimating many of the values of the previous system.

John Ikenberry in his After Victory shows how the international system changed definitively in 1648, 1815, 1919, and 1945. These were "big bangs" in the international system that redefined the meaning of war and military victory. As Max Weber defines the issue, the central dilemma of politics is how to turn raw power into legitimate authority. One can organize an international system after a great

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[22] Quoted in Carnes Lord, "The Myth of Victory," Journal of Politics (Aug. 1980): 505

[23] Dan Reiter, How Wars End (Princeton, 2009),2.

[24] Jack Levy, War in the Great Power System (U. of Kentucky, 1983), 3.

victory in a number of ways. A world order can be organized by international institutions, a balance of power regime, or by a hegemon. It is in the interests of a victorious power in a great war to legitimate its power in more than military terms. This is less costly to the victorious great power as it seeks to maintain its status at a sustainable cost.

In international systems defined by commonly shared values, wars will be like a duel if the two sides have "a common standard of success and failure in the military context."[25] We see in the 18th century European powers that shared a common set of cultural values. This meant that wars among the great powers were limited. When an army was defeated in battle or a key territory taken, both sides recognized the fact and proceeded to the peace table without seeking to fight a total war. Partly this was due to a general revulsion at the kind of total religious war that had nearly destroyed Europe in the sevententh century. In this previous kind of war, the two warring sides often saw victory in totalistic terms. Winning battles was not enough; one had to convert the enemy population to your religion before the war could end. Only by de-totalizing war and the pursuit of victory could international relations lead to the more chess-like war of the eighteenth century.

The lack of "a common view of victory and defeat" can be seen in World War Two when Germany invaded Russia. By German standards, Russia should have been defeated by the end of 1941 even without Moscow falling to the Germans. Millions of Russians had been killed or captured and the most valuable territory of Russia had been taken. Yet Russia refused to capitulate. Differing standards of victory and defeat separated German and Russian understandings of the war. The war therefore could only escalate further to ever more apocalyptic levels of violence (the widely cited figure of twenty million Russians dead as a result of the war is probably an underestimate).

War has rarely been relatively clean and chess-like as it was in the 18th century (and even then, it was hardly "clean" for those directly involved). In modern times, ideologies, nationalism, and ethnic rivalry have led to a situation in which "war has lost much of its duel-like quality."[26]Instead of war being the sport of kings and ambitious grandees, it is now a struggle that has no agreed-upon end point. Victory as a signifier of definitive endings to war may be a thing of the past.

Why do wars occur? What does military victory achieve? While some conflicts are wars of choice, other military clashes are inevitable and even necessary according to the political scientistsA.F.K Organski and Jack Kugler . Their work The War Ledger argues that a dominant power and its chief challenger in a given international system are "likely to wage war on one another whenever the challenger overtakes in power the dominant nation faster…the faster the power transition, the greater the risk of war."[27] How is power defined by Organski? It is the productivity of a nation, the talent and skills of its population, and the efficiency of its political system that make a nation powerful.The relative growth of nations in an international system determines the power hierarchy. At the top of the hierarchy are always a few nations that aspire to the top position. At certain critical junctures in history, war and military victory are "ratification events" that signal to the international system that a leading power has been overthrown in the power hierarchy by a new power that is more productive and efficient. Spain's conquest of the New World signified the rise of Spain to hegemony in Europe from 1494 to 1648. France from 1648 to 1815 dominated European power politics. Great Britain from 1815 to 1945 emerged as the hegemon of the international system. Currently, U.S. global hegemony is under threat by a rising China. Not all power transitions occur as one might predict. For example, Imperial Germany surpassed Great Britain in terms of economics, population, and military efficiency, but still failed to attain hegemonic status in the Thirty Years' War of the 20th century (1914-45).

While war is structurally inevitable for Organski(given the ever shifting dynamics of power in any given international system), there is also the view that the way war is fought and victory is achieved is inherently a paradoxical affair. Edward Luttwak notes in his The Paradoxical Logic of War that the military strategy adopted to achieve victory is always a story of paradox, irony, and contradiction. For

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[25] Pillar, Negotiating Peace: War Termination as Bargaining (Princeton, 1983), 28.
[26] Pillar, 29.
[27] A.F.K.Organski, War Ledger (U. of Chicago, 1981), 20.

example, against weaker foes the linear straightforward logic of grinding an enemy down by fighting him in the way he expects to be fought works just fine if you are much more powerful than the enemy and are willing to pay the price in attrition warfare. But if you are not greatly stronger than your enemy, the linear logic of attrition warfare is not an attractive option. As one strategist notes, "What works today will not work tomorrow because it worked today."[28]The German attack on Verdun was designed to bleed the French army to death in World War One. This attrition warfare worked well, but it also bled the German army nearly to death as well. The attractiveness of self-consciously paradoxical avenues to military victory thus becomes obvious. In World War Two, France logically sought to fight the same war of attrition against Germany that seemingly worked for itin World War One. Germany however had an incentive to take a paradoxical approach to a new war with France given its failed attrition strategy in World War One. The French rationally expected the Schlieffen plan to be re-enacted in World War II, especially given that France had created the Maginot line protecting the border between France and Germany. Germany instead decided to make its most important attack through the heavily wooded Ardennes Forest. This was a counterintuitive move, since it was the least expected and most risky at the time. But the paradoxical logic behind such a move is clear: sometimes doing the most difficult thing is the winning strategy if your enemy has already spent his efforts on preparing against all the obvious and most intuitive moves you can make. On the other hand, overwhelming success can have a paradoxical effect on the meaning and legacy of the ensuing victory. As Williamson Murray notes, the German victory over France was so overwhelming that "for the Germans, the victory over France suggested that everything was possible."[29] Hubris was followed by nemesis as Germany bit off more than it could chew when it attacked Russia the following year in 1941 and gratuitously declared war on the U.S.

Luttwak makes clear that the paradox of war is also the paradox of peace. Peace and war are not necessarily opposites. If war is the continuation of policy by other means, peace is the continuation of sublimated conflict by other means. Peace can cause war. After all, in peacetime the victor tends to let his defenses down as other nations look for easy prey. During times of peace, relative shifts in national power take place. A growing economy in peacetime conditions also produces increased war-making capability should conflict break out. Prosperity in peace can actually encourage war since it is the most economically powerful countries that can wage war most effectively.[30]Luttwaknotes that "if peace did not induce war, there would be no war – for war can't perpetuate itself [due to inevitable exhaustion]."[31] In this schema, the purpose of victory is to "bake in" the fruits of military victory at the culminating point of success before letting the war drag on to an unpredictable end with an enemy whose will might stiffen if it sees no exit strategy other than increased resistance.

Separating victory from a possible peace is the issue of war termination. However, according to Michael Handel - one of the leading scholars on the topic – "war termination is a necessary but not sufficient condition for peace."[32] Victory may spur an enemy to revenge. Or, victory may provide a foundation for peace with the defeated party becoming a potential ally. Germany's defeat of France in 1871 and its subsequent annexation of Alsace-Lorraine made the French eager for *revanche*. The Congress of Vienna in the aftermath of the Napoleonic Wars treated France in such a way as to vitiate the French desire for revenge. One of the problems of transitioning from victory to peace is that for the military professionals who manage warfighting, "war is an activity with an independent momentum and logic."[33] Transitioning from war to peace is therefore difficult as friction and confusion ensue when civilians take over the direction of affairs just as the military has nearly brought a war to its end. In World War One, allied general such as Pershing argued that the war needed to continue until Germany was occupied. Diplomats at Versailles decided otherwise.

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[28] Colin Gray, Defining and Achieving Decisive Victory (Strategic Studies Institute, 2002), 24.
[29] Quoted in Gray, 38.
[30] The major thesis of Paul Kennedy'sThe Rise and Fall of the Great Powers (Vintage, 1989).
[31]Edward Luttwak, Strategy: The Logic of War and Peace (Belknap Press, 2002), 68.
[32]Michael Handel, War Termination: A Critical Survey (Hebrew University, 10.
[33] Handel, 34.19

Leaders like Bismarck, Ataturk, Churchill, and Kennedy were successful in taking over delicate situations from the control of military authorities because they did not "press their victories and successes to the extreme; they have been moderate and tried to secure a lasting peace and had a developed long-range vision."[34] The ability to put oneself in the shoes of one's defeated enemy can make or break the peace that follows war.

Edward Luttwak notes that factors such as falling birth rates, de-bellicization, and liberal-left ideology have all made military action problematic in the western world. The Vietnam War in the U.S. led many to question traditional attitudes toward patriotism and military service. War and victory came to be seen by many as outdated and uncivilized notions. The Cold War's nuclear standoff made even military professionals doubtful about the efficacy of war. Luttwak believes that the "West has become…comfortably habituated to defeat. Victory is viewed with great suspicion, if not outright hostility. After all, if the right-thinking are to achieve their great aim of abolishing war they must first persuade us that victory is futile or…actually harmful."[35]

The Reagan revolution of the 1980s began to turn the tide against such beliefs. The military thinker Colin Gray captures the spirit of this revival of traditional attitudes toward war and victory in his work Defining and Achieving Decisive Victory. Gray's attacks the idea that the pursuit of victory is "an atavistic notion" even in the post-World War II West.[36] When war comes, victory must be pursued if the sacrifice of war is to be made worthwhile. Strategy must serve as a bridge between military power and policy lest battlefield success be "squandered by incompetent peacemaking."[37]Winning World War Two mattered because the allies turned military victory into a lasting political settlement that prevented great power war after 1945. Winning World One was problematic because military victory was not transformed into a stable peace or even lasting truce. According to Gray, even "decisive victory is hard to translate into desired political effect."[38]Arguments continue to this day as to whether America's tremendous military victory in Iraq in 1991 is a classic example of a military victory being wasted at the peacetable. Gray notes that "military victory do not themselves determine the outcome of war; they only provide political opportunities for the victor – and even those opportunities are likely to be limited by circumstances beyond their control."[39]

Rethinking the dichotomy between war and peace is also a necessary exercise when it comes to examining the concept of military victory. As Rotermund notes in his Fog of Peace, "on the dead are not in conflict. Peace is not the absence of conflict."[40] One might say that peace can be the continuation of war by other means. Various forms of competition – economic, political, cultural, etc. – take place in peace-time, yet produce winners and losers (albeit bloodlessly, one hopes). Just as war can seem pointless without a hope forvictory, peace can be pointless without freedom. True peace for Rotermund requires an absence of monopolies, be they economic, political, or cultural. To foster true peace and dis-incentivize recourse to civil war, a society must allow heterogeneous interests to exist. Competition among these interests will produce knowledge that will benefit all in society. Incremental change will allow society to develop without exploding into violent conflict.

As long as there is no world government, international relations will continue to be a "recurring struggle for wealth and power among independent actors in a state of anarchy."[41] Any peace that exists after military victory in the international system depends upon the victory being considered legitimate by the international community. Napoleon won many campaigns, but failed to legitimate his victories either ideologically or in terms of delivering sufficient public goods to subordinate nations that would

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[34] Handel, 42.
[35] Gray, 3.
[36] Gray, 2.
[37] Gray, 7.
[38] Gray, 18.
[39] Gray, 39.
[40]Rotermund, Fog of Peace (Strategic Studies Institute, 1999), 9.
[41] John Ikenberry,After Victory: Power, Order, and Change in World Politics (Princeton, 2014), 5.

incentivize compliance with the would-be French hegemon. Fred Ikle notes in his useful work Every War Must End that a great power's restraint on means and ends in war can yield tangible benefits in the aftermath of war for victor and defeated alike. Ikle notes that today's enemy may become tomorrow's ally. America achieved military victory over Japan and Germany, but made the victory significant by turning these countries into future allies.

We must even consider the idea that the idea of victory is itself a fantasy, an idealized concept with no correspondence to reality outside the realm of mutually agreed upon perceptions. Indeed, according to upholders of this view such as Russell Weigley, the pursuit of the fantasy of victory has led to endless tragedy in human history. Weigley notes in his magisterial Age of Battles (focusing on the wars of early modern Europe) that the "age of battles nevertheless proved to be an age of prolonged, indecisive wars, sufficiently interminable that again and again the toll in lives, not to mention the cost in material resources, rose grotesquely out of proportion to anything their authors could hope to gain from them."[42] From the time of Gustavus Adolphus to Napoleon, war time and again proved futile, indecisive, and often counterproductive. The thesis of Age of Battles is that if war was to work at at a tolerable cost, evidence for the view would surely be found in the age of the great captains, an age extending from the 17th century to 1815. Yet the author is unable to find any example of war producing decisions at a tolerable cost (with the exception of England being able to use coalitions and allies to achieve its aims due to the unique nature of its geographical position). Weigley notes that during this era if "war's 'power of decision' was the 'one virtue' that war had ever had, then war never had any virtue."[43] At most, Weigley is willing to concede that war may be justified as a defensive measure to preserve values that themselves can't be quantified in cost-benefit terms. But on the whole,Weigley finds that war may serve as a negative instrument of policy, but not a positive one.

So we come full circle. The tragedy of world politics is that nations are forced to struggle for status, wealth, and influence in conditions of anarchy. Differential growth and miscalculation lead to war. Some wars can lead to major changes in the power hierarchy of the international system. The new dominant power or powers can set the "new rules" of behavior in the system. Such rules can define what legitimates war and what ratifies military victory in the system.[44] As the international relations scholar Robert Gilpin points out, perpetual peace is always possible so long as nations refuse to defend themselves in all circumstances. Since this will not happen, the role of victory is ideally to ratify and legitimateinevitable changes in the international system. The more decisive the victory, the more chance there is to produce a new and stable status quo that puts off the next catastrophic war for as long as possible.

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[42] Russell Weigley, Age of Battles (Indiana, 1991), xii.
[43]Weigely, xiii.
[44] Robert Gilpin, War and Change in World Politics (Cambridge, 2008), 35.

Cultivating a Trauma-Informed Environment

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Introduction

Nearly 45 million children in the United States have experienced one or more types of childhood trauma according to Sacks & Murphy (2018). This is an overwhelming statistic, and one which should greatly concern educators and administrators. With the return of students after a year of being away from school and their peers, teachers and school personnel will need to utilize preventive, in the moment and after the

moment strategies in dealing with traumatized students. The paper will include a brief review of literature, trauma defined, impact of trauma and strategies that teachers can utilize in the classroom.

Review of Literature

Childhood trauma is unfortunately increasing across the nation. Two thirds of children in the Unites States experience at least one traumatic event before they turn 16, and approximately 674,000 children were affected by maltreatment in 2017 (Fondren et al., 2020). Although not every child and adolescent who experiences trauma will go on to experience post-traumatic symptoms, estimates suggest that 7 percent of girls and 3 to 4 percent of boys in the United States experience post-traumatic stress disorder. An even larger portion of the population experiences subclinical levels of traumatic symptoms like avoidance, hyperarousal, and intrusions (Fondren et al., 2020). Not only does trauma negatively affect students in the ways listed above, but up to 20 percent of youth exposed to trauma show behavioral problems that may interfere with their functioning as opposed to 10 percent of youth who have not experienced trauma (Fondren et al., 2020). Given the devastating circumstances these children are having to face, it is an educator's responsibility to not only become educated about how trauma can impact all areas of students' lives, but to also cultivate a culture within the school community that considers the way trauma has impacted them.

Trauma Defined

The Substance Abuse and Mental Health Services Administration defines trauma as "an event, series of events or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional or spiritual well-being" (Luthar& Mendes, 2020). These traumatic experiences may or may not include exposure to death, acute injury, or sexual violence. Other examples could include acts of mass violence, like school shootings, or natural events, like hurricanes, tornadoes, wildfires, and floods. However, the most common threat of trauma to children and adolescents is the chronic and systemic acts of violence that happen repeatedly within their home or community (Rumsey & Milsom, 2019). Trauma occurs when an intense, sudden experience shocks a child or adolescent, overwhelming them and leaving

them feeling disconnected from themselves. However, trauma is not confined to an event; it affects the nervous system. When the basic parts of the brain perceive danger, they automatically stimulate an exceptional amount of energy. This involuntary shift of energy includes fast respiration, dilated pupils, decrease of verbal ability and stiffened muscles. Or, when a person experiences an inescapable threat or prolonged stress, muscles can collapse, and the body shuts down (Steele &Malchiodi, 2012). This is important for educators to understand because later, when the threat or danger is over, even the slightest trigger can send the same alarm signals to the brain and throughout the body until it again becomes overly excited or shuts down. When this happens, children can become agitated, morose, depressed, irritable, clingy, and withdrawn (Stelle &Malchiodi, 2012).

Impact of Trauma

Children and adolescents exposed to trauma can experience lasting physical, mental, and emotional harm. Traumatic exposure can also lead to a negative impact on physiological, psychological, and social development as well as overall school engagement. For example, children who have experienced trauma in their life are more likely to show attachment problems, regressive behavior, anxiety, depression, conduct problems, health-related problems, academic and cognitive problems, and delinquency, and to be involved in child welfare and juvenile justice systems (Rumsey & Milsom, 2019). Exposure to violence has been correlated with lower student grade point average and lower rates of high school graduation. Additionally, trauma has been connected to lower student achievement test scores and class grades as well as a higher tendency for school suspension, expulsion, and school failure (Crosby, 2015). Unfortunately, students of color and students who come from lower income families are disproportionally affected by trauma and stress. Individuals who live in financially poor communities are more likely to be exposed to a range of traumas and losses that affect individuals, families, and schools. Students who come to their school with these stressors are much more likely to have mental health and social-emotional challenges (Blitz et al., 2020). However, they typically reside communities that lack adequate mental health services. This limited access to the help they need could be one factor that contributes to the school-to-prison pipeline. Kids who are troubled are punished for behavior that is a byproduct of stress and trauma. (Blitz

et al., 2020). School personnel must be educated on recognizing trauma and behaviors associated with that trauma so that they can be proactive in handling health needs of all students (Blitz et al., 2020).

The impact of childhood trauma is overwhelming and reaches many functions. Figure 1.1 shows the impact on such areas as Cognition, Brain development, behavior, mental health, peer/adult relationships, emotions, and physical health. These children come into classrooms with impaired self-regulation. They experience academic difficulties with learning & retrieval, attention, language & communication skills, memory and recall, problem solving and analysis issues, organizational problems, cause and effect, sequencing, and mental flexibility. All these issues lead to a lack of engagement in learning process (Cole et al., 2009).

In addition to academic impairment, students experience behavioral and social/emotional symptoms which may look like mental illness (e.g., ADHD, Emotional Regulation ODD (Operational Design Domain), conduct disorder, anxiety and/or depression). Behavioral impairments may include impulsivity, aggression, noncompliance & defiance, and withdrawal. On the other hands, students may show signs of perfectionism and over-compliance. These issues may appear to teachers as misbehavior and manageable by the student. However, it is critical that teachers understand the symptoms and signs of a traumatized students within a classroom and do not confuse their actions/behaviors as behavior within the student's control.

Some students suffer social/emotional impairment with peers, school staff and authority figures. Relationships may be adversely affected because of trauma-related events at home and not related to the authority figures and peers at school. Students may struggle with taking another's perspective and unproductive reactivity. It should not be an expectation of the teacher that a traumatized student display capacitates in any of the five social/emotional competencies. These include self-awareness, self-management, social awareness, relationship skills and responsible decision making. Rather, students who bring trauma into the classroom will struggle in all these areas and need proactive, in the moment and after the moment strategizing by the teacher.

Strategies

The ability to self-regulate is a requirement for learning and starts with the adults. Our power to self-regulate -- remain calm, rational, and under control--sets the tone for success in our schools and classrooms **(**Souers& Hall, 2019**).** Creating a culture of safety in our classrooms and schools is imperative for allstudents to experience success (Souers& Hall, 2019). As educators nurture and create this environment where students can experience emotional, physical, and mental safety, three moments of time should be considered regarding students who may exhibit emotional or behavior symptoms of trauma. First, school personnel must plan purposeful proactive steps to help a child maintain self-regulation. Additionally, a plan should be formulated to assist the student regaining self-control. Next, educators must consider strategies to implement during a situation where a child is unable to self-regulate. Finally, educators must consider steps to reflect and evaluate actions taken during a crisis in order to prepare for and prevent future crises **(**REL AP & CCSSOC, 2020).

Preventative Strategies

All students want to behave as they want to experience love, understanding and success (Causton& Macleod, 2020). If a challenging behavior is predictable, proactive steps can be taken to prevent the potential behavior. The power of human connection is frequently underestimated. Humans are innately wired for connection to others; connection is required to feel safe and regulated. When studentsexperience feelings of safety, learning can take place. Relationships, meaningful connections with another human being, is the foundation to preventing challenging behaviors. However, not everyone, especially students who have experienced traumatrust relationships(Souers& Hall, 2019).

Students who exhibit challenging behaviors may not have the skills, prior knowledge, or opportunitiesto make meaningful connections to their peers, teachers, and other school personnel (Causton& Macleod, 2020). Relationships require authenticity and consistency as relationships develop over time(Souers& Hall, 2019). Relationships arecontinually shaped by experience andcontext (Fisher, Frey, & Hattie, 2021). Educators explain and make-meaning of student behaviors based on their own experience (Souers& Hall, 2019). School personnel must be conscious of the messages being communicated by their verbal and nonverbal interactions with all students. Educators sometimes inadvertently approach relationships with

students who have challenging behaviors through a deficit-based lens. For example, to focus on a student's challenging behavior and call the behavior "attention-seeking" is deficit-based thinking when all students seek attention from their teachers (Causton& Macleod, 2020). Switching the focus from student behavior to student needs disrupts deficit-based thinking (Souers& Hall, 2019).The verbal exchanges and nonverbal cuesof teachers have consequences on peer-to-peer relationships. Generally, it is not a secret to students who the teacher dislikes. It is critical topurposefully increase positive interactions with students who may be more difficult to reach or cause classroom disruptions. Students who are disliked by the teacher have a greater chance of being rejected by their peers than those who are liked by the teacher (Fisher, Frey, & Hattie, 2021).

One cannot thrive without relationships (Souers& Hall, 2019). School personnelmust create and nurture an environment where students experience connection rather than an environment where students feel like they must achieve something in order to belong (Thompson & Barber, 2021). To create an automatic emotional connection with a student, simply call them by their name. Calling someone by their name and correctly pronouncing it is a sign of respect and increases trust, empathy, accountability, and communication. Names are the greatest connection to one's identity and individuality (Fisher, Frey, & Hattie, 2021). Simply smiling provides a powerful foundation to building a teacher-student relationship. Our facial expressions, words, gestures, tone of voice, level of enthusiasm when communicating with students greatly impacts our relationships with our students. The routine of greeting students, a simple act that last seven seconds, can be the most crucial time of a class. Unfortunately, greeting students is often one of the first routines to deteriorate after the first month of school (Fisher, Frey, & Hattie, 2021).

A sense of belonging is foundational for a culture of safety to exist and for learning to occur (Thompson & Barber, 2021). For students who move to a new school, feeling a sense of belonging can take time. As a former administrator in an elementary school, our leadership team investigated strategies to help transient students feel connected to the school. Our school counselor contactedall employees in the district and the parent-teacher organization and requested donations of new or clean, gently used shirts with the school/district logo. While new students were being registered, the school counselor created a positive

experience for the new students and their families by simply spending time with them and giving the new student a shirt with the school logo. The smiles made through that simple gesture were the results of foundational actions needed to nurture a positive and trusting relationship between the school and the student.

Every behavior is an outcome of an unmet need. The challenge for school personnel is to focus on the motive or the unmet need rather than the disruptive behavior (Souers& Hall, 2016). Explicitly teaching students to name and scale their emotions is one strategy to proactively prevent disruptive behaviors. Teaching, modeling, and practicing appropriate social skills and coping strategies will provide students with tools to use to help them self-regulate (Souers& Hall, 2019). Acknowledging successful implementation of the self-regulation activitiesincreases the likelihood that they will be used again. Celebrating successes highlights students' strengths and helps everyone see the student with challenging behaviors as an integral member of the classroom. Most importantly, when we celebrate student successes, we help the student perceive himself/herself as lovable and worthwhile and aid him/her in recognizing his or her own potential (Souers& Hall, 2016).

The teacher establishes the environment and the climate of the classroom. A teacher's demeanor, behavior, approach, tone of voice, volume, and word choice all affect how a student will act and react in the classroom (Souers& Hall, 2016). "Stressed brains can't teach, and stressed brains can't learn" (Souers& Hall, 2016, p. 29). To provide support to students and colleagues, school personnel mustpractice self-care. In as much as educators help students identify their emotional triggers, teachers must identify their owntriggers and identify strategies to implement when triggered. Often, school personnel live in fear of the student outburst as they wait for the moment to happen. Living in fear is fatiguing and is unhealthy (Souers& Hall, 2016). As a principal, when I would shift to focusing on worry and living in fear, our school counselor would tell me to identify what is real and what is unreal. Focusing on what is unreal increases fear and worry. Determining what is real focuses on the truth. The more one practices self-awareness and grows his/her emotional intelligence, the easier it is to manage the needs of our students (Souers& Hall, 2016).

In the Moment Strategies

Regulation starts with us: our classroom environment, our actions and interactions, our disposition. Even withintentional preventive measures in place, there are times when a student will be unable to self-regulate. When the brain perceives a threat that threatens its safety, the human brain's limbic system responds with flight, fight, and freeze behaviors. Universally and across cultures, the brain's first response is flight. In an educational setting, flight may look like a student withdrawing, daydreaming, or avoiding others. Students may physically flee, hide, or wander. Older students may skip class (Souers& Hall, 2016). The brain chooses to fight only when flight is not seen as an option. In the typical school setting, flight may not be seen as an option, so the brain moves to fight (Souers& Hall, 2019). Arguing, screaming, yelling, demonstrating defiance, acting silly,and behaving aggressivelyare examples of students experiencing fight. When the brain moves into freeze, students my refuse to answer or participate in discussion, appear numb, or even exhibit a blank look (Souers& Hall, 2016).

When students are unable to self-regulate, the most important action school personnel can take is to preserve their own self-regulation and maintain personal control of his/her mindset, comments, and actions (Souers& Hall, 2016). The goal of the educator is to assist the student in regaining self-control. Challenging behavior is evidence of students asking for love and understanding in a way they know how (Causton& Macleod, 2020). Educators must remember disruptive behavior is a survival response; it is not personal (Souers& Hall, 2016).

Engaging with the student in an emotional response results in arguing or a power struggle. Neither party is thinking rationally as both are during a limbic system response. Power struggles should be avoided. Pausing, refraining from speaking, and breathing are excellent strategies to implement when experiencing an emotional trigger(Souers& Hall, 2016). School personnel should model calm with their verbal & nonverbal communication. Validating the emotions, a student is experiencing is critical to helping a student regain self-control. Validation is not agreeing with but rather acknowledging that this is his or her truth and experience. Validation allows the student to know they are being heard; their voice is important (Souers& Hall, 2016). Practicing active listening strategies will help school personnel to identify the

unmet need that motivated the disruptive behavior. While projecting calm with their own tone of voice and nonverbal cues, educators must be aware of the student's body language and emotional state (REL AP & CCSSOC, 2020).

After the Moment Strategies

Following an emotional outburst, students and school personnel may experience a strained relationship in need of repair. Students who have difficulty trusting adults may even perceive the relationshipas destroyed. The responsibility for repairing the relationship begins with the adults. It is not the responsibility of the student to repair the relationship. (Souers& Hall, 2016). Effective communication must be practiced, and school personnel must be willing to address the issues that strain the relationship (Fisher, Frey, & Hattie, 2021).

Before repairment can take place, participants must engage in listening, reassuring, and validation the initial steps of effective communication. All of those involved must engage in authentic self-reflection. School personnel must self-reflect to identify what role, if any, they had in triggering the student's emotional response (Souers& Hall, 2016). Students should be led in self-reflective practice to identify triggers and appropriate responses to those triggers. When students are self-regulated,they are thinking rationally. This is the time to teach, model, and practice coping strategies; when a student is in the middle of an emotional, survival response is not the time to teach a new strategy. When repairing a relationship, it is important to praise the student for implementation of self-regulation strategies and identify alternative ways of managing and avoiding similar future disruptions (REL AP & CCSSOC, 2020).

Too often, the steps of repairing relationships and resolution are skipped. Once students self-regulate, they are returned to class to continue with their class activity. During reflection, it may be determined that relationships with classmates need to be repaired. Depending on the exhibited behavior, classmates may exhibit fear of the student. Again, school personnel have the responsibility of providing guidance to repair the relationships. Resolution occurs when all parties come to terms with what happened and collaborate to prevent future disruptions (Souers& Hall, 2016).

Conclusion

Trauma-informed teaching must be at the center of each classroom as students return to school. Students may experience a wide range of off-task behaviors and unable to reasonable cope with pressures associated with trauma.Utilizing preventive, in the moment and after the moment strategies to help students deal with the effects of trauma can be incorporated into the classroom environment as tools to help our students regulate their responses to trauma. As teachers learn how to create and maintain engaging, accepting, and calm learning environments for all students, the focus can be where on learning and growing academically, socially & emotionally.

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Figures and Appendices

Figure 1.1 Child Trends: How to Implement Trauma-Informed Care to Build Resilience to Childhood Trauma (Bartlett &Steber, 2019)

Assessing Elementary Preservice Teachers' Knowledge, Awareness,Attitude, and Beliefs Toward Environmental Education

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Abstract
The purpose of the study was to assess knowledge, awareness, attitude, and beliefsof preservice teachers toward environmental education. The participants for this study were twenty-six preservice teachers enrolled in science method for teachers' course.Pre-and post-environmental education content knowledge tests based on interactive virtual activities were used to assess environmental education content knowledge.Pre-and post-Environmental Education Awareness Survey (EEAS) assessed awareness, attitude, and beliefs toward environmental education.The overall results indicated that the preservice teachers improve their knowledge, awareness, and positive attitude, and beliefs toward environment and environmental education. However, the results suggested that preservice teachers need to be exposed to several different environmental education and awareness activities. The study further recommended that environmental education must be introduced at the elementaryschool level.
Keywords:Preservice Teachers, Environmental Education, Knowledge, Awareness, Attitude

Introduction

According to The United States Environmental Protection Agency (USEPA)"environmental education increases public awareness and knowledge about environmental issues or problems. In doing so, it provides the public with the necessary skills to make informed decisions and take responsible action," (EPA, 2020, p.1). The entire environment depends on the local community, stakeholders, teachers, and students of course. All parties including K-12 students need to be educated about environmental literacy to acquire knowledge and skills. Environmental literacy should start with parents and early childhood educators. This prepares students to obtain environmental knowledge and instructional skills(Texas Parks &Wildlife Department, 2020). This makes essential that preservice and inservice teachers should be knowledgeable about environmental education. The present study, therefore, assessedpreservice teachers' knowledge, awareness,attitude, and beliefs toward environmental education.Environmental education benefits students, schools, community, and the world at large. It provides opportunities for students to be engaged in an outdoor-natural learning environment. Environmental education plays an important role in the process of building the knowledge, skills, awareness, and values among students and teachers. Providing awareness helpsunderstand environment literacy which plays a key role in shaping future generations, enhancing awareness. The reflections of teachers and students, therefore,address their knowledge acquisition and awareness(Keles, 2017).

Theoretical Framework

The studyaims at developing critical thinking, participation, and reflection in the context of environmental education. Every person has an opportunity to acquire the knowledge, values, attitudes, and skills needed to protect and improve the environment(Dunlap, 2008).The study addresses the theory of connectivism. Connectivism is a relatively new learning theory, developed and based upon the idea that people process information by forming connections (Admin, 2016). Without the experience and connections formed

within the present study, connectivism could be linked as to why the preservice teachers must incorporate environmental education activities in hands-on activities, class demonstrations, and lesson/unit plans during K-12 instruction. Furthermore, according to theorist John Amos Comenius, children learn best from natural, real-world experiences. His goal of education is to seek and find a method by which the teachers teach less, and the learners learn more (Comenius, 1967).

Environmental Education &Preservice Teachers

Environmental education should be applied in a lifelong learning process to protect the environment that is needed throughout life. Environmental education should start in early education so that students will gain knowledge on how to protect the environment. According to teachers, context and activities about environmental education are not located in the curriculums and this can be the reason for the insufficiency among schools. Environmental issues are limited in many schools, and it can be thought that this situation cannot be enough to gain environmental education to students by teachers (Demirtaş, 2017). Preservice teachers need to be trained to gain knowledge of environmental education. This helpsthem build motivation and awareness of environmental issues. Through the training process, preservice teachers gain better awareness and understanding of environmental issues. With proper training, preservice teachers are encouraged to explore the environment to help students empower themselves in the environmental literacy (Law et al., 2014). To serve society in addressing environmental issues, it is important to provide learning opportunities for students, and community, to develop their understandings and values of environmental education. Elementary schools need to be involved so that students from a young age become aware of environmental issues in their local communities and around the world. This will help preservice teachers and students to take action in improving and maintaining the environment locally. Environmental education should be recognized as a lifelong study of everyone in the world to respond to an ever-changing world(Treagustet al., 2016). Preservice teachers should be knowledgeable about the environment to effectively instruct in schools at elementary level. To gain an understanding of environmental education they need to have opportunities to instruct and interact with children. The true effectiveness of environmental education may depend on teachers' knowledge and attitude toward the process of environmental education(Moseleyet al., 2002).

Preservice teachers should teach students responsibility towards nature and the need of people regarding the nature. Understanding of environmentalism may help to correctly understand it and to have stronger environmental steps to protect it. In this respect, teachers have significant roles to play in making environmental education awareness much widespread(Gizemet al., 2017). Environmental education needs to be improved due to environmental problems around the world. Elementary preservice teachers must receive environmental training. Learning about environmental education can change the environmental behavior of the whole community. The change in environmental education comes from the empowerment of the people (UxíoPérez-Rodríguez etal., 2017). Preservice teachers need to become more aware of how their teaching beliefs shape their teaching practice. Teacher educators need to give attention to discussing the goals and roles of environmental education. Teacher educators need to be explicit in the objectives and delivery of environmental education activities and curricula with preservice teachers(Mosleyet al., 2008). Environmental education helps to achieve awareness, attitude and responsible behavior about concern about the environment has the main role to reach an environment. There is a lack of many environments-natural, awareness, knowledge, and attitudes. The acknowledgment of environmental education can increase the attitude and knowledge about the environment(Aminrad et al.,2013). Environment is the sum of all conditions and influences of the development of the life of human

beings and other organisms. The environment implies knowledge ofthe out environment but also values and necessary skills to solve environmental problems.

Teachers play a very significant role in developing a greater awareness about environment among students. This may bring radical change among the students in the way of thinking, living, and working(Ghosh, 2014). New Ecological Paradigm (NEP) scale is designed to measure the environmental concern of groups of people using a questionnaire to better understand their responses. The NEP scale allowspeople to agree or disagree with each statement. This will help develop valid and reliable measures of the environmental world view. The NEP is widely used in the United States and many other countries. One can better understand the changes and relationships using the scale. For this study, NEP is used to survey preservice teachers to understand the way teachers feel about environmental education. The scale is determined to change environmental education results in a meaningful way (Dunlap et al., 2000). The world has changed dramatically since the 1990s and is still changing constantly. Environmental problems such as pollution, oil, and global warming areamong the major issues. The NEP scale help researchers and scientists to measure an environment of a person's values, attitudes, and beliefs. Researchsupports that very person has an opportunity to acquire the knowledge, values, attitudes, commitment, and skills needed to protect and improve the environment. To create new patterns of behavior of individuals, society towards the environment we must provide the training for all teachers to understand the environmental guidelines (Dunlap et al., 2000).

Environmental Education &Teacher Education

Teachers and students should have information, skills and, values necessary for a sustainable environment. According to Texas Parks & Wildlife Department (2020) teachers need to be educated about environmental literacy to acquire knowledge and skills. Environmental literacy. Additionally, inservice and preserviceteachers need to be aware of how outdoor learning supports structured learning in the classroom.Keles (2017) stated that teachers need to include environmentally beneficial projects, like planting on the school grounds, picking up litter, recycling programs in their lesson and unit plans. These projects will allow students to gain a sense of their capacity to affect positive change in environmental education.Environmental education plays an important role in the process of building the knowledge, skills, awareness, and values among students and teachers.This plays a key role in shaping future generations, enhancing awareness(Keles, 2017). Environmental education is learner-centered where students can construct their understanding through hands-on learning. Engaging students in environmental experiences challenges them to use higher order thinking skills through an active learning community where learners share ideas(Erhabora& Don, 2016).Environment education encourages students to understand how environment and human systems interact with one another. Young (1998) addressed how environmental education and early childhood education recognize the importance of developing strong links between teachers, learners, and their communities. Dermanet al. (2016) further emphasized how environmental education has an important role in preventing environmental problems and helping people acquire positive attitudes and behaviors towards the environment.

According to Kubat (20170 classroom and laboratory environments are a limited learning environment for science courses. Science offers many opportunities for students in outdoor education. Classrooms are not enough to create enriched learning environments. Teachers should take outdoor education activities; it will help students to love science and provide them with an entertaining and instructive way to internalize abstract concepts. Gaining awareness in science education, enhancing students' science knowledge, and providing rich science environments are among the primary tasks of the science teacher. Outdoor education activities to achieve them have great importance in terms of students discovering nature,

acquiring social experience, and gaining concrete experiences(Kubat, 2017). Not having adequate training is a major reason for not providing environmental education. Learning about communication, values, critical thinking, and interactive work forms is important. Teachers need to learn effective practices that show how environmental education could be integrated into daily instruction(Petegem,etal., 2007). Some 90% agree that a teacher's good teaching can overcome students' inadequate environmental education background and 78% disagree that increased effort in environmental education teaching produces little change in some students' environmental education achievement(Sia, 1992).

Environmentaleducation is relevant to improved standards of living that are compatible with environmental, cultural, and societal imperatives following the local conditions and environments in which people live (Donghee, 2000).To achieve cooperation the teacher must structure and present the goals in such a way that requires children to think critically. In environmental education, children can interact, motivate, and positively influence each other. For children to be able to make decisions on their activities in the framework of environmental education on their own, certain conditions must be fulfilled(Vodopivec, 2017). Many opportunities are available in the outdoor setting for learning about science. The backgrounds of elementary preservice teachers are not traditionally focused on science. Environmental education's inclusion in elementary school curricula is intended to provide useful information and awareness to students, its quality depends on teachers' knowledge and attitudes toward teaching environmental education(Carrier, 2009). Environmental education has many important features that justify its place in the curriculum. Critical thinking skills and political knowledge and values, which underlie environmental education, are crucial to the achievement of individual involvement in decision making and action to improve and maintain environmental quality(Tilbury, 2006). According to Jones &Leakas (2009)the idea of engagement on the part of the student as being an important element to environmental education lessons and the students‟ response within society to the issue of environmental awareness.

Studies indicate that the average American spends more than 95% of his or her time indoors. Many young children, regardless of where they live, spend most of their time in settings and activities that keep them essentially isolated from direct contact with the natural world. The result is that many young children are at risk of mental development and health problems(Wilson, 1996). Learning should begin with what is familiar to the students. There should be a strong emphasis on the ethical aspects of environmental issues. Environmental education has a linear relationship between knowledge, understanding, and awareness of environmental issues and the way that this brings a change in attitudes and subsequent behavior(Gayford, 1996). Environmental education is an important tool for life. An effective environmental education is achieved ifcommunity get involve and motivate K-12 students. Environmental education impact students in and outside the classroom(Sonowal, 2009). According to Tuncera et al. (2009) environmental education should begin with what is familiar to students and build on this to enable them to relate their learning. According to Singh (2021) that preservice teachers who are exposed to this type of instruction on green energy are more likely to include that knowledge in their own classrooms based on their classroom experience. Additionally, students should be taught to understand and examine facts and take responsibility for their choices (Singh, 2021). As such, renewable energy should be a required area of study for preservice teachers. Students expressed enthusiasm about environmental education teachers provide knowledge and understanding of environmental issues around the world. Cotton, (2015) further added that the role of socially critical environmental education is, therefore, to challenge students and put forward an alternative worldview. However, despite these criticisms, in much of the environmental education literature there is a growing expectation that teaching environmental

education should be about changing attitudes, or even engaging students in acting on environmental problems. Therefore, the present study will assess preservice teachers' environmental education content knowledge, awareness, attitudes, and beliefs toward environmental education.

Methods

The participants for this study were preservice teachers enrolled in science methods for teachers' course. Twenty-six preservice teachers participated in this study. ExploreLearning.com and Environmental Education Awareness Survey (EEAS) survey instruments were used.

1. Explorelearning.com: ExploreLearning, virtual lab wasused to assess preservice teachers' environmental education content knowledge on water pollution, pond pollution, & climate change.Explorelearning.com impacts a student's achievement positively. It takes learning to a new level which encourages us to learn new things. It allows students to explore concepts that would be impossible in schools. It gives students a visual way to build their knowledge and obtain the information.
2. Environmental Education Awareness Survey (EEAS): EEAS is fifteen questions survey instrument, a modified version of EEAS instrument developed by Dunlap, Liere, Mertig, & Jones (2000); Ozden (2008); Mancl, Carr, &Morrone, (2003) was administered to assess preservice teacher's environmental education awareness, attitude, and beliefs toward environmental education.

Procedure

Pre-and-post- environmental content knowledge assessmentswere administered using the ExploreLearning.Similarly, pre-and-post environmental education survey were administered to assess environmental awareness, attitude, and beliefs. Pre-assessment was administered in the 2nd week of the semester and the students were given a week to complete both fifteen-questions pre-EEAS and three ExploreLearning activities: water pollution, pond ecosystem, and climate change. Each activity included five multiple-choice questions so a total of fifteen multiple-choice questions which the preservice teachers had to complete as their pre-content knowledge test based on environmental education and awareness. The fifteen questions were to test their initial knowledge and awareness of environmental education. Post-assessment was administered in the 13th week of the semester. The preservice teachers completed the same fifteen multiple-choice questions from their pre-assessment as their post content knowledge test based on environmental education and awareness plus participated in the post-EEAS.

Data Collection & Analysis

Quantitative data was collected from pre-post content knowledge tests& pre-post survey responses. A paired t-test was conducted for analysis.

Results

The results are based on pre-andpost-environmental education content knowledge tests based on ExploreLearning virtual activities that assessed their knowledge on environmental education & pre-and post-Environmental Education Awareness Survey (EEAS) (Table 1).

ExploreLearning Results: Three ExploreLearning activities: water pollution, pond ecosystem, and climate change. Each activity included five multiple-choice questions so a total of fifteen multiple-choice questions which the preservice teachers had to complete as their pre content knowledge test based on environmental education and awareness. The fifteen questions will test their pre-post knowledge and awareness of environmental education (Figure 1).

A paired t-test results indicated a significant difference between pre-post content knowledge tests (n =23, p<0.05). The calculated Cohen's d = 1.25. This indicated a large effect size. Meaning that a magnitude of the mean difference between the pre-post content knowledge tests is very large. This suggests improving understanding of environmental education knowledge and its awareness, more environmental education-related field visits, observations, activities are essential to introduce to preservice teachers to make them aware of environmental education knowledge particularly in the fields of water pollution, aquatic ecosystems, and climate change.

Environmental Education Awareness Survey (EEAS): The following results indicate the questions which are responded by most of the participants. The following tables show the agree and agree percentages. To streamline the survey results, only questions that had a 25% or higher response rate was

recorded. Therefore, this study, only the following nine questions were selected and presented below. Table 1 indicate agree% and disagree response rates. The fifteen survey questions will test their initial knowledge and awareness of environmental education.

For this study, all the responsesof 25% and above were only recorded (Table 2). The results suggested that except for two questions: "I am willing to have environmental problems solved even it means sacrificing many goods" &"Technology developments are damaging to the environment," For all the remaining thirteen questions, the preservice teachers "agree" responses increased from pre-to pre-post responses and the difference is statistically significant (*p<0.05).*Six questions/response statements-- out of fifteen questions had 100% "agree" responses on the post-survey. These questions are: "Humans are severely abusing the environment; Strongly disagree that environmental problem affects not only the present generation but also future generation; People should care more about environmental problems; I think each of us can contribute to protecting our environment; People damaging environmental more than any other living things; Environmental education should be started at the elementary-school level. Since the last statement "Environmental education should be started at the elementary-school level," is one of the most important statements for the study as the study was mainly to create environmental awareness among K-12 students. Percent responses "Neutral," for the question, "Over the past few years, do you think the environment in Texas has gotten worse?" 40% ofpreservice teachers' responses were neutral. Even though the preservice teachers predictedan increase in positive response, surprisingly, the response, "Neutral," and was less than 25% in the post-survey.For, "Disagree" "Science and technology can solve the entire environmental problem – 50% responded and for "Environmental problem should be left to the experts," almost 80% and above responded. There were a couple of interesting difference in responses on pre-post responses were indicated, example, "Environmental problem should be left to the experts,""Agreed" response decreased from 60% to 20%. "Nearly all human activities are affecting theenvironment,""Agreed" response decreased from 100% to 75%. Similarly, "I am willing to have environmental problems solved even it means sacrificing many goods,""Agreed" response decreased from 56% to 50%.

Discussion

The findings from this study were supported by other similar studies by (Carrier, 2009; Cotton, 2015; Donghee, 2000; Jones &Leakas, 2009; Keles, 2017; Tuncera et al., 2009; Tilbury, 2006; Vodopivec, 2017, Singh, 2021). Based on the results it is imperative that preservice teachers increased their knowledge and awareness, attitude, and beliefs toward environment and environmental education.TheExploreLearning virtual activities helpedpreservice teachers engage and explore environmental content knowledge. Explorelearning elevated preservice teachers' learning to a new level which encouraged the preservice teachers to gain new knowledge concerning the environment and environmental education. It allowed preservice teachers to explore concepts that had not been explored before. It gave preservice teachers a visual way to build their knowledge and obtain the information about the environment and environmental education. This experience overallpositively impacted preservice teachers' awareness, attitude, and beliefs toward environmental education. The fifteen survey questions assessed preservice teachers' awareness of environmental education. The survey helped preservice teachers to better understand environmental knowledge, awareness, attitudes, and beliefs. The findings are similar toKubat (2017) which suggests gaining awareness in science education, enhancing students' science knowledge, and providing rich science environments are among the primary tasks of the science teacher. Outdoor education activities to achieve them have great importance in terms of students discovering nature, acquiring social experience, and gaining concrete experiences. Furthermore, the findings are also supported by Petegem, et al. (2007) who indicated that teachers need to learn effective practices that show how environmental education could be integrated into daily instruction.These results, along with similar studies, suggest that preservice teachers who have strong environmental education knowledge and awareness have positive environmental attitude and beliefs are more likely to be engaged

in the lessons and understand the environmental concept. Teachers should put forth more effort into designing lessons that are guided inquiry or discovery learning using environmental education activities because it will likely improve their students' environmental awareness, positive attitude toward environmental education and beliefs. These concepts of actively constructing knowledge align with the NGSS as well. Additionally, including education for environment and sustainable development in preservice teacher programs could equip future generations to be more actively involved in environmental awareness and sustainability; therefore, requirements should be established that would implement environmental education into teacher-preparation programs.

Conclusion

The pre-post results based on ExploreLearningcontent knowledge tests suggested that the preservice teachers content knowledge on water pollution, pond ecosystem, and climate change did increase at the end of the semester and it was statistically significant. Similarly, the preservice teachers' awareness of environmental education and environmental awareness indicated an interesting difference between pre-post responses. Six questions/response statements-- out of fifteen questions had 100% "agree" responses on the post-survey. These questions are: "Humans are severely abusing the environment; Strongly disagree that environmental problem affects not only the present generation but also future generation; People should care more about environmental problems; I think each of us can contribute to protecting our environment; People damaging environmental more than any other living things; Environmental education should be started at the elementary-school level. Since the last statement "Environmental education should be started at the elementary-school level," is one of the most important statements for the study as the study was mainly to create environmental awareness among K-12 students. The results from the study will educate preservice teachers to incorporate environmental education and awareness activities in K-12 hands-on activities, lesson plans, science tricks, WebQuest, interactive bulletin boards, short science intern activities and class demonstrations, incorporate environmental education and awareness activities during "Earth Day" week, making earth day theme activities. Environmentally aware learners who we will be teaching in the future need to be actively involved in their learning, and guided inquiry and discovery learning where environmentally engaged activities are encouraged. Teachers who use guided inquiry or discovery learning will likely find that their students will be more motivated to learn the material and will demonstrate deeper comprehension of the material learned, due to being more engaged and participating in the learning process (Singh, 2021). In addition, teacher preparation programs should include more aspects of educating preservice teachers about environmental education to encourage them to teach their students these increasingly important topics. In the race for environmental sustainability for the United States, educating preservice teachers could make all the difference.

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Table 1

Preservice teachers participated in pre-post assessments

Pre - Assessment	Post - Assessment
Environmental Education Awareness Survey &ExploreLearining activities	Environmental Education Awareness Survey &ExploreLearining activities

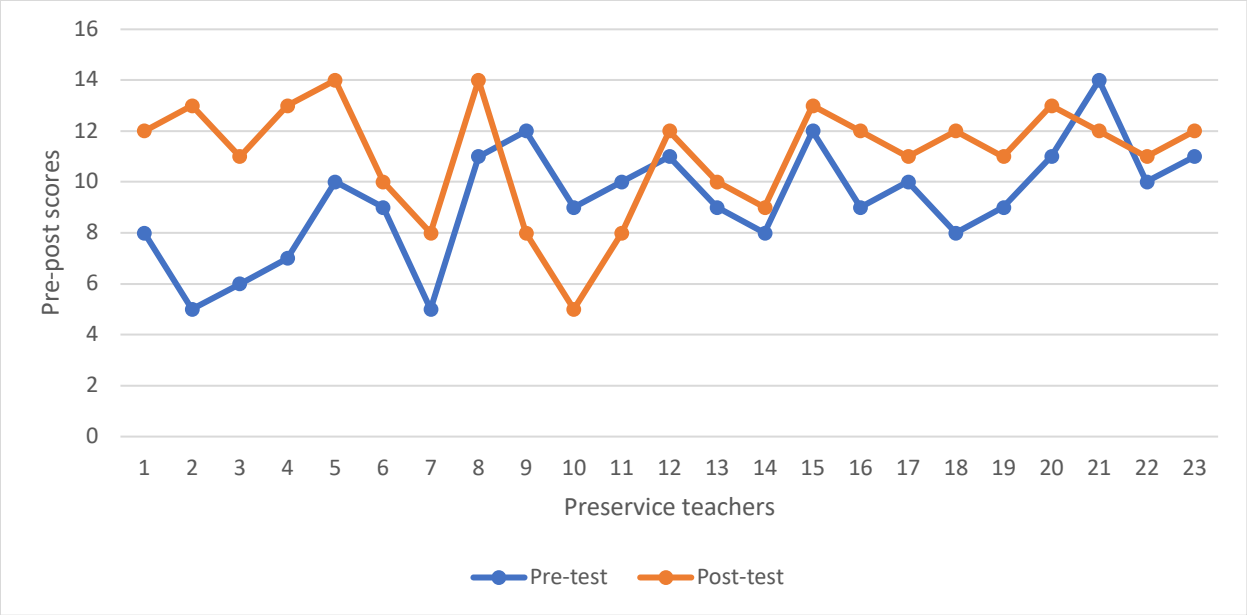

Figure 1
Showing Pre-post scores on exploring activities based on water pollution, pond ecosystem, and climate change

Table 2
Preservice teachers' responses to pre-post environmental education surveys

EEAS Questions	**Pre-survey responses**			**Post-survey responses**		
% Response Rate	**Agree**	**Neutral**	**Disagree**	**Agree**	**Neutral**	**Disagree**
Humans are severely abusing the environment.	100	-	-	100	-	-
Over the past few years, do you think the environment in Texas has gotten worse?	52	40	-	80	-	-
Strongly disagree that environmental problem affects not only the present generation but also the future generation.	100	-	-	100	35	-
Clean environmental is the property common to all people.	58	25	25	65	-	26
Science and technology can solve the entire environmental problem.	29	25	45	35	25	50
People should care more about environmental problems.	100	-	-	100	-	-
Environmental problems should be left to the experts.	64	-	84	25	-	80
Nearly all human activities are affecting the environment.	100	-	-	75	25	-
I think each of us can contribute to protecting our environment.	100	-	-	100	-	-
People damaging environmental more than any other living thing.	88	-	-	95	-	-

I am willing to have environmental problems solved even it means sacrificing many goods.	56	32	-	50	40	25
Technology development is damaging to the environment.	-	64	25	-	63	25
People damaging environmental more than any other living thing.	90	-	-	100	-	-
Environmental education should be started at the elementary-school level.	90	-	-	100	-	-

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The Fearless Girl Story:
Public Dialogue and the Cocreation of Meaning

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As the sun rose on March 8, 2017, International Women's Day, the world discovered the newly-installed bronze statue of a young girl standing defiantly in front of the Wall Street Charging Bull statue in New York city. As the sunlight revealed the strategic placement of this piece of corporate public art, so too did it reveal the inequities facing women in the financial industry. Public reaction was immediate and intense. The public dialogue between strong supporters and fierce critics on the meaning of this symbol continues to be debated. The story of the Fearless Girl statue helps us understand how public dialogue contributes to the cocreation of a symbol's meaning.

The Case Study of the Fearless Girl Statue

The case study of the Fearless Girl examines the narrative or the story of the sculpture to exemplify the enactment of empowerment theory. According to Fisher's narrative paradigm, humans are storytellers, and we experience the world as a set of stories each with a beginning, middle and end (West & Turner, 2004). The narrative or the story of the Fearless Girl begins in 2017 with the placement of the statue in New York,and the story continues to evolve through public dialogue without an end in sight.This analysis of the Fearless Girl story illustrates the usefulness of the empowerment framework which focuses on the positive dimensions associated with theories of power.

Empowerment can be understood through key elements of "power to" and "power with" and "power within" (Kabeer, 2010). Kabeer (2010) views "power to" as a woman's "increased ability to make strategic choices and exercise influence;" "power with" as women "coming together to reflect, to question and to act on their subordinate status;" and "power within" as a woman's "sense of agency and self-worth" (pp. 107-108). In this paper, the messages in the public dialogue on the meaning of the Fearless Girl are examined through the lens of the empowerment framework with a methodology of a thematic analysis of the words and actions via media reports.

Cocreated Meaning of Fearless Girl

What does the Fearless Girl statue symbolize? The installation of the Fearless Girl statue defiantly challenging the Charging Bull initially symbolized womenchallenging the inequality of the patriarchal Wall Street. "In 2017, one in four companies in the 3,000 largest companies in America still did not have a single woman on the board" (Amiri, 2018, para. 9). After Fearless Girl captured the world's attention, "301 companies have added a female director and 28 others have committed to doing so in the near future" (Amiri, 2018, para. 10). Supporting gender equality in the workplace makes sense because, according to Vullo (2017), "workplace diversity and inclusion of multiple perspectives is not just the right thing to do, it is good for business and consumers" (para. 7). Through public dialogue, the meaning of Fearless Girl evolved from a symbol of a marketing campaign to a symbol of women's empowerment globally. The meaning of Fearless Girl is cocreated by multiple public stakeholders engaged in a public dialogue.

Origins of the Fearless Girl Statue

The concept for a statue originated when initiallythe advertising agency McCann New York approached Sallie Krawcheck with an idea for a piece of commercial art for her business. Krawcheck is the CEO and cofounder of Ellevest, a digital financial advisor for women based in New York City. Krawcheck was not impressed with the original idea of a fearless cow statue, so McCann New York made revisions and

presented Krawcheck with the new idea of a fearless girl statue. However, Krawcheck passed on the offer(Reeves, 2019). McCann New York subsequently formed a partnership with State Street Global Advisors (SSGA), which is part of the holding company, State Street Corporation, to include the fearless girl statue in a marketing campaign. SSGA wanted to celebrate International Women's Day, raise its profile, marketits Gender Diversity Index fund titled SHE and pressure financial companies to increase the number of women on their boards through an activist campaign (Reeves, 2019). SSGA chose the timing of the installation of Fearless Girl on International Women's Day "to celebrate the power of women in leadership, and the potential of the next generation of women leaders" (Stevens, 2017, para. 7). The marketing campaign was designed to lead to a better return on investments,and it incorporated a style of investing called "gender lens investing" (Reeves, 2019). SSGA considers the Fearless Girl statue to be a symbol of its stewardship platform and to having an impact (Rueckert, 2018). Furthermore, "Fearless Girl has sparked important conversations around the world and has increased shareholder action on the issue of gender diversity" (Rueckert, 2018, para. 3). The campaign capitalized on "what ad experts call a 'brand experience' of a product or message, using some kind of creative, unique vehicle—in this case, a sculpture" (Dobnik, 2017). As public art, Fearless Girl became the symbol of a campaign message to promote gender equality in the financial industry.

Description of the Fearless Girl Statue

Fearless Girl is a 250-pound, 50-inch-tall bronze statue of a young girl with a ponytailin a sundress standing with her hands on her hips (Reeves, 2019; McLean, 2017) created by the sculptor artist, Kristen Visbal (Dobnik, 2017; Eckardt, 2017). Fearless Girl looks directly forward with her chin slightly lifted. In 2017, Fearless Girl stood and stared directly at the 7,100-pound, 11-foot-tall bronze statue of a charging bull in the Bowling Green park located at the entrance to New York's financial district (Reeves, 2019). Both statues appeared to be locked in gaze. "Suddenly the bull's legs seemed to herald not so much a charge into battle as an out of control beast stopped in its tracks" (Reeves, 2019, para. 1).

The "Fearless Girl" statue was installed directly in front of the New York Wall Street "Charging Bull" statue the night before International Women's Day on March 8, 2017.The plan for the night-time installation of "Fearless Girl" was to mirror the night-time installation of the "Charging Bull" by the artist Arturo DiModica in 1989. Both statues were installed during the night, however, the "Fearless Girl" statue had a one-week permit while the "Charging Bull" had no permit. The city of New York extended the permit in increments to allow the "Fearless Girl" to stay in place for a month, then a year until the 2018International Women's Day,while the "Charging Bull" had been allowed to stay permanently (CNN, 2017; Dobnik, 2017; Eckardt, 2017).Now there is only a small plaque with the outline of footprints where the Fearless Girl stood in the Bowling Green park (Li, 2018).

On December 10, 2018, the Fearless Girl statue was moved to a permanent home in front of the New York Stock Exchange (NYSE) building in lower Manhattan (Amiri, 2018; Garcia, 2018). The "Fearless Girl" currentlystands defiantly facing the NYSE with her direct gaze. According to Rep. Carolyn Malone (D-NY), "Now, instead of staring down the bull, she's [Fearless Girl] going to be staring down all of business right here in the center and capital of business for America, here in New York City" (Amiri, 2018, para. 3).New York City mayor Bill DeBlasio stated, "This move to a new location will improve access for visitors and ensure that her message and impact continues to be heard" (Garcia, 2018, para. 16). DeBlasio indicated that the Charging Bull statue would be moved there eventually because he believed the two statues should be near each other (Garcia, 2018). This eventual move of the Charging Bull would return the statue near its original placement (Garcia, 2018).

Public Reaction to Fearless Girl

Public reaction to "Fearless Girl" was immediate, reactive, and powerful. The story of Fearless Girl went viral almost immediately. Reeves (2017) states,

> The reaction appears to have been greater than anyone involved expected. On Twitter, Fearless Girl generated more than 1 billion impressions in its first 12 hours and broke 4.6 billion impressions within 12 weeks. On Instagram, Fearless Girl sparked almost a quarter-million unique posts featuring the statue in three months. The statue cost an estimated $250,000, but generated free marketing worth at least $7.4 million, according to Adweek (para. 3).

SSGA CEO, Ron O'Hanley states, "clearly Fearless Girl has gotten a lot of attention and so she has already been very constructive" (McLean, 2017). One goal of success of the Fearless Girl campaign by SSGA was to affect a change in the dialogue at companies, and O'Hanley argues that Fearless Girl immediately changed the tone of meetings (McLean, 2017).

Fearless Girl was "immediately hailed as a powerful feminist symbol" (Reeves, 2019, para. 2), and "its presence has been polarizing" (Eckardt, 2017, para. 1).The context surrounding the symbolism of Fearless Girl, more specifically the timing of Fearless Girl's installation and the circumstances of recent events in the United States, may have contributed to the polarizing effect in the public's reaction (Reeves, 2019, Eckardt, 2017). As Reeves (2019) states, "The Women's March has just channeled the outrage that millions felt after Hillary Clinton's loss to a man known for his boorish behavior toward women, and the #MeToo movement was about to shake up corporate America" (para. 2). Public art—even commercially sponsored public art—"by its very nature…elicits a response" (Eckardt, 2017, para. 2), and Fearless Girl evokes a powerful response. Fearless Girl continues to generate interest and debate via public dialogue.Social media posts, media coverage and direct physical interaction with the Fearless Girl statue are all components of the public dialogue.Fearless Girl draws consistent crowds since it first appeared (Stevens, 2017).

Stakeholders, Public Dialogue, and the Cocreation of Meaning of Fearless Girl

The SSGA campaign triggered a response from multiple public stakeholders who actively participated in the cocreation of meaning of Fearless Girl. Public stakeholders include SSGA, McCann New York, workers on Wall Street, artists (Fearless Girl; Charging Bull; peeing pug), global corporations, women, girls, men and media. Fearless Girl symbolizes different things to different stakeholders. Fearless Girl holds a commercial meaning as a symbol of a financial index for SSGA, which hoped to raise its profile through its stewardship campaign of increased gender leadership diversity in the financial industry. SSGA describes how Fearless Girl symbolizes "the power and potential of having more women in leadership" (Wienner-Bronner, 2017).

Fearless Girl also holds a commercial meaning as the symbol for a successful marketing campaign by McCann New York. Global financial corporations had mixed reactions to Fearless Girl. Some institutions accepted the goal of SSGA's stewardship campaign and increased the number of women leaders on their boards as a sign of agreement with the goal or as an appeasement to public pressure. Other financial institutions deferred acting immediately but were willing to make changes in the future. Some financial institutions ignored the symbol of Fearless Girl. SSGA considered the Fearless Girl campaign a success because of the increase of the number of women on the boards and because dialogue on the issue of gender diversity in the financial industry took place and continues to be debated. SSGA believes public dialogue on the issue was an important goal of the Fearless Girl campaign. This dialogue continues to occur via photographs, social media posts and reports in news media. Fearless Girl symbolizesmultiple meanings for public stakeholders,so this case study offers a polysemous analysis.

Support for Fearless Girl

'What do you see when you look at the Fearless Girl?' is a question asked by Maria Vullo, Vice Chairman and Chief Legal Officer at Emigrant Bank, in her essay in *American Banker* (2017), as she offers her reflections on what Fearless Girl means. As a woman leader in the financial industry, Vullo's work experiences combine with her gendered worldview to offer a vision of the broader meaning of Fearless Girl. Vullo sees the message of Fearless Girl as inspirational as she states,

> I hope you, like me and my mother before me, see a vision of the world as youwant it to be. I hope she inspires you to use your voice to work toward that visionevery day and in every way. As Fearless Girl reminds us, it is absolutely essentialto have women in the room and at the table, in all industries, equally respected,heard, equally valued. Fear not, just forge forward (2017, para. 10).

This sense of hope and inspiration is also combined with an appreciation of history—of the women before us. According to Rep.Malone, Fearless Girl "represents progress, potential and hope. But she also represents all the women who fought for equity and equality before us" (Amiri, 2018, para. 7).

Visbal, the artist behind Fearless Girl, describes the message Fearless Girl sends as she states, "we're saying, hello, women are here, too. We're an integral part of this community. And, furthermore, we're the future of this community" (Fishman, 2017, para. 16). According toO'Hanley, the CEO of SSGA in 2017, in an interview with Bethany McLean of *The Atlantic*, the message of the Fearless Girl was "not 'You versus me.' The point was that where there once was just a you, now there's a me, and we're here together" (2017, para. 9). Vullo (2017) explains how "Fearless Girl's message extends far beyond the extremely important appeal for board diversity" as she states,

> The canny and hopefully enduring brilliance of Fearless Girl as a piece of public artisthatshe carries a personal, unique meaning to each one of us who has, all too often, experienced the reality of the male-dominated business world (para. 1).

Public dialogue was enacted through physical interactions with the Fearless Girl statue. There is a positive sensory experience of being in the presence of the Fearless Girl and connecting to her message. People take Fearless Girl selfies or others ask others to take their pictures. People stand next to the Fearless Girl statue and pose in "similar power stances" (Garcia, 2018). Women and girls pose like Fearless Girl in their photographs. They stand straight, feet apart, hands on hips, and lift their chin to stare directly at the camera. Their smiles fill their faces with joy and confidence. Women and girls visually claim their space. These photographs are interactive expressions of how they connect to the symbol of the Fearless Girl. The Fearless Girl statue is a symbol of a commercial campaign, but it is also public art, and it allows for the public to engage in interactive expressions.

Attacks on Fearless Girl

There are critics of the Fearless Girl statue and what it symbolizes. They are critical of the Fearless Girl statue, the location of her placement as well as on broader issues of gender inclusion and equity.These critics also engage in interactive expressions;however, their actions demonstrate their opposition to the symbol of Fearless Girl. One such critic, Di Modica, the sculptor of the Charging Bull statue, believes the Fearless Girl statue is "infringing on his copyright" (Wiener-Bronner, 2017) andcalled Fearless Girl an "advertising trick" (Eckardt, 2017). Di Modica "has denounced the rival statue as an attack on and an insult to his own" (Stevens, 2017, para. 9). Another critic, a New York artist by the name of Alex Gardega, went so far as to craft a papier-mache of a urinating pug. Gardega placed the "peeing pug" at the feet of the Fearless Girl statue to demonstrate his opposition to the Fearless Girl statue because he believed it was disrespectful to the sculptor of the Charging Bull statue (Reeves, 2019; Wiener-Bronner, 2017). After a few hours, Gardega removed the pug statue "because 'people were kicking it,' and broke the pug's leg" (Weiner-Bronner, 2017). Gardega was upset"that the Fearless Girl will be seen as comparable to the Wall Street bull" (Wiener-Bronner, 2017).

More disturbing interactive expressions involved misogynistic attacks on the Fearless Girl. One such incident involved a white male Wall Street worker who simulated a sexual assault on the Fearless Girl statue in the middle of the day in front of a large crowd and who seemed unconcerned that others recorded his assault (Reeves, 2019). Fearless Girl "has also been vandalized in arguably the worst possible way—being covered in pro-Trump paraphernalia—and joined by signs with messages against immigration and in support of the Anti-Defamation League" (Eckardt, 2017, para. 6).

Critics have also charged that Fearless Girl is an example of "false feminism" or a symbol of"corporate feminism" or a "marketing coup" or a "publicity coup" (Garcia, 2018; Rueckert, 2018; Stevens, 2017). These critics charge that a symbol such as the Fearless Girl statue directs attention to the success of only a small number of women. They argue that this message,which focuses on women leaders on corporate boards, reduces feminism to "the appearance of women in a space currently dominated by men is a success in and of itself" (Livingstone, 2016). This concept called "corporate feminism" argues against this limited impact on the lives of most women because it places the burden of women's success on an individual's work ethic instead of focusing on the systematic structural barriers and societal inequality women face in the workplace (Livingstone, 2016). While it is true that some women have made it to the inner circle of the corporate boardroom, even supporters of Fearless Girl acknowledge that more work is needed to achieve gender equality. The goal of women's equality is viewed as a journey by Vullo (2017) who states,

> the journey is not done. We have to work harder to achieve equal representation for women in the boardroom, in the C-suite and beyond. This is not about some quota—this is about recognizing that women are competent and skilled, yet they are being unfairlypenalized because of their gender (para. 5).

The image of a ladder is used to symbolize how the work is not done. As Vullo (2017) states, "We must equalize the ladder for other women working their way in and up; we cannot pull it up behind us and hope for the best" (para. 6).Regardless of whether people believe that Fearless Girl is a positive or a negative symbol for gender equality, people react to the Fearless Girl statue, and this public dialogue revolves around their interpretation of the Fearless Girl's message.

Analyzing the Meaning of Fearless Girl

Public reaction to the Fearless Girl statue reveals a polysemous analysis of the Fearless Girl message. Fearless Girl triggers an emotional response. All stakeholder expressions help to cocreate the meaning of the Fearless Girl. No matter whethera stakeholder expresses support or opposition to the Fearless Girl statue, there is an over-arching emphasis on the main issue of the Fearless Girl's message. Public dialogue on the meaning of Fearless Girlcenters on women's empowerment.Thecontroversy surrounding the Fearless Girl message is an opportunity to shine light on the issue of women's empowerment. To any woman or girl who has been unable to claim her space due to patriarchal pressures, Fearless Girl is a positive symbol of potential and hope. Fearless Girl symbolizes the visual image of a female standing tall as she claims her space—her right to exist in the world. Fearless Girl creates a vision of inspiration for women and girls to live their dreams without fear or compromise. Fearless Girl has also become a symbol for the vision of a world where women and girls are treated equally with men and boys.

Negative messages toward Fearless Girl attack her presence and what she represents. There is anger toward a female standing her ground and claiming her space. The visual image of a young girl standing in the center of the male-dominated financial industry and staring with a direct gaze at the Wall Street Charging Bull is viewed as a challenge to the patriarchal system. While this challenge is viewed positively by those who support the Fearless Girl's message, it is viewed as a threat to those who attack her message. This scene is reminiscent of a Western movie showdown. The metaphor of a showdown implies that there is a fight over the issue of women's empowerment and that there can be only one winner—either men or women. Those who attacked the Fearless Girl statue did so verbally and physically to "win the battle." The artist of the Charging Bull claimed he was disrespected. Another artist added another small statue by Fearless Girl to demonstrate contempt for her and her message. A Wall Street worker simulated a sexual assault on Fearless Girl to try to claim power over her. Others used words to discredit the symbolism of Fearless Girl by calling the statue an advertising stunt of "corporate feminism" because the original SSGA message only focused on increasing gender diversity on corporate boards and because SSGA was fined for gender discrimination in 2017 (Reeves, 2019; Eckardt, 2017; Stevens, 2017).

Fortunately, these attacks do not destroy the positive message of Fearless Girl; however, they do demonstrate the divide in society over the issue of women's empowerment. Nikkhah, Redzuan and Abu-Samah (2012) argue for the nonzero-sum power model which means that when women gain power, it does not mean that men lose power. Equality, respect, and support of human rights creates a world of empowered women and girls, men and boys.

What Do You See When You Look at Fearless Girl?

> When I look at Fearless Girl, I can see myself. Not only in my current role as New York's top financial services regulator, but also as a young girl taught bymy parents to be bold and to not allow others to limit what I could achieve (Vullo, 2017, para. 2).

Vullo's quote above captures what many public stakeholders express about the meaning of the Fearless Girl. Fearless Girl has become a visual, physical expression of the need for equality. In this case study, public dialogue was examined to understand how stakeholders interact with the Fearless Girl todemonstrate what Fearless Girl represents. Fearless Girl symbolizes the gendered voice for equality.

The Fearless Girl statue enacts empowerment theory through its evolving story. SSGA's campaign to increase diversity on corporate boards enacts Kabeer's (2010) "power to" or women's increased ability to

exercise influence and have more strategic choices in their careers. Fearless Girl enacts Kabeer's (2010) "power with" as women come together to reflect and question their unequal status in corporations. The cocreated meaning of Fearless Girl expanded the initial SSGA vision of Fearless Girl. Fearless Girl enacts Kabeer's (2010) "power within" to represent the sense of agency expressed by women and girls who fearlessly claim their space. The value of public art and the value of public dialogue allows for the exchange of ideas for the interactive interpretation of meaning. The result is the cocreation of meaning of a symbol through the continuous public expressions of support and attack for this message. What do you see when you look at Fearless Girl?

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Resources Matter: Employing Culturally Competent Instruction for Preservice Teachers

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Despite the decades of efforts, dismantling inequities in the current education system still exist. Research recognized the significance of cultural competence for cultivating students' academic and behavioral outcomes. This study focused on identifying effective actions for growing culturally responsive practices in K-12 education through the use of deliberate resources. Although the findings identified five *Culturally Competent Practices,* the resources instituted to inform development, delivery and the assessment of instruction actively promotes a culture of reform and transformation. The purpose of this article is to move beyond a review of culturally responsive pedagogy. Rather than providing preservice teachers with more suggestions for culturally responsive teaching activities, this article provides teacher educators with specific cultural competence *resources* to encourage self-awareness, support cross-cultural skills, inspire the full potential of each student, demonstrate cultural knowledge, and foster the value of diversity among preservice teachers.

Introduction

The Association for Advancing Quality in Educator Preparation (AAQEP, 2020) reported that culturally competent educators are key to the United States' racially, culturally, and linguistically diverse public schools. To empower educators to implement culturally competent practices in all disciplines requires strategic *resources* necessary to foster desired shifts in instruction. Resources are defined in this paper as "all human, material, non-material audio-visual, school environment and community materials available in an academic environment to facilitate

school and simplify the teaching learning process (Usamn, 2016,p. 28)."
According to Behrstock-Sherratt et. al. (2014), access to (online) resources is one of the significant elements that leads teachers to be effective; therefore, accessing appropriate resources to dismantle inequities that exist in our schools must be the focal point.
Concerns regarding preparation for twenty-first century students are addressed vigilantly in scholarly studies (Acquah et. al., 2020; Hill, 2021; Endo, 2015; Gay, 2010;). Some research reflects modeling to make culturally responsive pedagogy explicit and training (Acquah, etal, 2020; Endo, 2015; Hill, 2021) and others focus on multicultural coursework (Lewis et.al, 2017). Although culturally relevant instruction is discussed, teachers still feel ill-equipped and uncertain how to respond to diverse populations (Acquah, et al., 2020, Landing-Billing, 2018; Gay, 2010). The COVID-19 pandemic and shelter-in-place mandate for schools and universities forced educators to move online to ensure continued studies. Likewise, preservice teachers, coupled with the complexities of distant learning (Hill, 2021) and educational practice completed programs without tentative trial and error (Endo, 2017). Online technologies were employed globally to facilitate learning (Kosar, 2021), with limited access and training. Culturally Competent teachers depend on access to culturally rich online resources, while demonstrating cross-cultural skills to engage local community organizations and illustrate cross-cultural knowledge to involve families to establish a capacity of inclusiveness (Sprott, 2020). The same holds true for culturally competent preservice teachers, a wealth of online resources, assets and strengths of the population served are essential to ensure authentic learning experiences.Educational technology and culturally rich resources are relevant to the adaption of instruction to meet the needs of diverse learners.
Johnson&Yerrick (2021) assert,
Here is, however, minimal precedence in education for exploring the use of digital video to reflect upon live teaching events collected in real-time. Digital video has emerged as the tool of choice for capturing and disseminating best practices, particularly in web-based and distance education contexts. (p. 10)
Designing a comprehensive inclusive learning experience for all students requires teaching practices that are thoughtful and sensitive to all learner profiles (AAQEP, 2020). The current conflicting demands of the pandemic and students' ability levels or access to digital devices are implications of distance learning modality inequities.
Developing and utilizing culturally competent *resources* are essential practices in obtaining the frame reference and student norm necessary to implement effective instruction. *Culturally Competent Practices* (Sprott, 2014) require innovative thinking processes that focus on the integration of cultural differences while promoting student engagement.
The five *Culturally Competent Practices (CCP):*

A. Educators demonstrate self- awareness
B. Educators exhibit cross-cultural skills
C. Educators recognize the potential of each student
D. Educators demonstrate cross-cultural knowledge
E. Educators illustrate the value of diversity

The *culturally competent practices* (CCP) framework cultivates instructional approaches and supports the theory of meeting the needs of diverse student populations requiring continuous improvement and teaching with a "cultural eye" (Irvine, 2003). There are few studies (Shedrow, 2017) that target strategic *resources* available to support quality instruction while infusing cultural knowledge. The focus on preservice teacher attitudes, beliefs, perceptions, training, biases, instructional outcomes are common among the scholarship (Keengwe, 2010; Taylor, 2010). The purpose of this mixed method study was to develop a culturally competent framework for employing lessons and resources necessary to support instruction. The research questions that guided this study were:

1.What resources are necessary to ensure adaptations impact instruction while employing *culturally competent practices (CCP)*?

2. What understanding of personal biases may impede the process of choosing the appropriate materials that is meaningful to all students?

3. To what extent can a repository of resources assist in implementing standards?

Literature review

The Common Core Standards and Texas Essential Knowledge and Skills identifies essential grade-level skills (CCSSO 2021; TEKS 2018), reflecting a national priority to improve students' college and career readiness. However, educators still face the challenge of recognizing that students from diverse backgrounds bring with them (Gay, 2010), differing sets of values (Landing -Billing, 2018) experiences, cultural knowledge, linguistic ability, and understanding of the learning process (Ebersole, Kanahele-Mossman, and Kawakimi, 2016). For students to learn, they must feel fully valued as individuals within their own distinctive ethnicity, linguistics, socioeconomic status, gender, and sexual orientation. Culturally competent educators intentionally employ instructional practices (Kosar, 2021) which identify students themselves as resources to help shape practices and policies for success in the educational setting.

Hill (2021) assessed preservice teachers' in-person observations and opportunities to practice classroom instruction to contribute to teacher readiness and relationship building in comparison to online learning while employing culturally competent pedagogy. Findings indicated a strong response in differentiated instruction in an online format (Kosar, 2021); however, levels of technology integration (Kosar, 2021) and time management were considered determinants of student motivation and willingness to learn. Gutiérrez and Rogoff (2003) assessed the contextual factors of one high school curriculum department that successfully enhanced urban students' enrollment in advanced level mathematics. They established that the application of a rigorous curriculum, active commitment to students, cooperative learning, and instructional practices that align with culturally responsive practice inclined students to take higher levels of content than their counterparts in other schools (Gutiérrez & Rogoff, 2003). In addition, they explicitly noted that effective teachers of Black and Latino students obtained *resources* that related to students' interests and connected to thought-provoking

curriculum concepts. The researchers suggest employing a cultural-historical approach to move beyond a widespread assumption that characteristics of cultural groups are evident in each individual. For instance, Mexican communities habitually include children in adult activities which relate to attentiveness. Conversely, in European-American communities, children are excluded from adult activities and observe what they are supposed to learn. Participants in various cultural customs differ in repertories when engaging in discussions with authority figures. Another illustration includes teachers of African American students acquiring skills to analyze literature and figurative language by using ritualized language play through Hip Hop (Taylor, 2010). A critical note from Taylor (2010) contended that teachers must be responsive to every need of students in the classroom and navigate critical consciousness of their own identities. Subsequently, preservice teachers must reflect on values and beliefs and authentically employ cultural-historical understanding of individuals in diverse communities.

Culturally Competent Practices (CCP) (Sprott, 2014) is a research-based approach that encourages educators to access cultural materials, cultural histories, online resources, art, music, traditions, and customs as a foundation to effective instruction. Cultural *resources* are those concepts that provide educators opportunities to engage authentic content that represent diverse learners' backgrounds, experiences, and identities. A relevant connection can be made when selecting literature resources for classroom instruction. Educators might consider these inquiries when choosing appropriate reading materials.

1. Do the characters in the text replicate the students and their families?
2. Do the events match the experiences of my students?
3. Is the setting in the story like the students in my class?
4. Did the story take place this year?
5. Do the communication styles match the students in my classroom?

Likewise, culturally competent preservice teachers must plan classroom activities grounded in real-world examples and authentic experiences to bridge any disconnect to engage theory and practice (Gutiérrez & Rogoff, 2003; Herrera, 2010; Hill, 2021). Resources chosen can provide opportunities for preservice teachers to evaluate and monitor misunderstandings, false opinions, stereotypes, and suspicious attitudes about culturally diverse individuals (Endo, 2015) thorough critical reflection. Subsequently, access to appropriate culturally relevant materials can build community in the classroom (Endo, 2015) and encourage analytical consideration. Educators wanting to expand and implement effective instruction provide the resources needed to ensure that racially, ethnically, and linguistically students thrive (Gay, 2010). Current research literature has reported that, to facilitate the teaching-learning process, educators may employ an approach to teaching that uses students' cultural knowledge as a "conduit" (Ladson-Billings, 2014; Hill, 2021; Kondor, 2021; Lewis, et. al, 2017; Shedrow, 2017;). Preservice educators struggle and gamble with the concept of teaching students with cultural histories different from their own experiences (Hill, 2021). However, they are confident in the capacity to achieve in an online environment (Kosar, 2021)

Culturally competent practices are vital, whether in person or in an online format. Executing and developing *CCP* produces the capacity to comprehend, communicate with, and effectively with students and families across cultures online (Kosar, 2021; Sprott, 2014). In considering digital learning as a resource, a report entitled "Strategies for Building Cultural Competency," Hanover Research (2014) suggests that a multi-layered method is necessary to improve the academic performance of all students, especially *resources* focused on the core areas in order to foster the development of staff cultural competency. Gay (2010) explains that failing to provide students with curriculum, instruction, and assessment that are centered on their experiences, culture, and traditions is a major obstacle to providing them with an empowering academic experience. The same applies to preservice teachers, avoiding curriculum addressing race, class, religion, language, power, and privilege in teacher education programs becomes a hindrance in acquiring *CCP*and their academic capabilities and pedagogical discourse for diverse learners (Lewis, et.al, 2017). Without that kind of commitment, preserviceteachers will not be effectively prepared to meet student's needs in the educational environment.

Methodology

This research study utilized the Delphi method. The Delphi method is a unique technique in educational research for foreseeing the future, investigating, and developing agreement on a subject where conclusive information is lacking (Jorm, 2015; Linstone&Turoff, 1975). This method is useful for forecasting events or trends by soliciting the opinions of experts who refine their forecasts based on feedback from other experts in an attempt to achieve compromise or convergence of opinions. It involves refining information from experts to achieve consensus or convergence of opinions through a series of structured rounds of reflection (Rowe & Wright, 1999). Delphi studies are considered appropriate for investigating questions that can benefit from subjective input from a group of highly qualified experts (Fischer, 1978).

Data was collected and analyzed via a mixed method design using the Delphi method. Three rounds of data were collected to determine outcomes (Skulmoski, Hartman, and Krahn, 2007). Each round maintained the anonymity of panelists, the exchanges facilitated through the researcher, the optimal numbers of rounds and the validations of panelists of their responses. Round one qualitative measure was collected via email and personal communication and round two consisted of an online survey. In round three, consensus from the experts was reached, despite geographical locations (Stitt-Gohdes& Crew, 2004). According to Fischer (1978), the Delphi method is most appropriately used for developing value and panel analysis. According to Yousuf (2019), the number of rounds can be augmented until reaching an agreement. In this study, consensus was reached with the panelist in the third round.

Participants

An expert national and international panel (*N=15*) represented the United States, Australia, New Zealand, Canada, and several other countries. Each panelist has made major contributions to the field, produced multiple publications, and expressed a willingness to serve. Participants

were purposefully chosen for their knowledge and role within the profession a) Multicultural Education research experts, (b) Multicultural public-school experts, (3) Multicultural Education leader experts, and (d) diverse demographics of Multicultural Educators. Fifteen experts participated throughout the duration of the research project.

Findings

Research question #1: *What resources are necessary to ensure adaptations impact instruction while employing culturally competent practices?*

The first inquiry investigated the resources necessary to ensure adaptations impact instruction while employing *Culturally Competent Practices*. In this study, several panelists offered a plethora of concepts to be implemented prior to instruction. Culturally competent educators continually develop and use specialized knowledge and understanding about the history, traditions, values, family systems, and artistic expressions of major student groups that they serve. Culturally appropriate reading materials and content engages and motivate students (Landing-Billings, 2014). Several panelists agreed with the following consensus regarding resources. "When planning lessons, the teacher must spend time researching content knowledge related to the curriculum, produced by and about at least one historically marginalized group, to integrate into the curriculum." Institutionalizing culturally appropriate materials can contribute to the overall reading and achievement ensuring relevant connections to all students.

The panelists emphasized *resources* as a pertinent construct to continuous improvement and means to adapt instructional materials (Irvine, 2003). For example, panelist #1 explicitly reported "Online resources are essential for teachers to make learning relevant;" such as, employing web sites, like the site for the Smithsonian Institute, allows a class access to accurate histories about a variety of cultures, contributions, assets, history, etc. of nonwhites. Students are constructively learning by performing the subject as writers, historians, scientists, musicians, and artists themselves.

Research question #2: *What understanding of personal biases may impede the process of choosing the appropriate materials that is meaningful to all students?*

Question #2 inquired about participants'understanding of how personal biases may impede the process of choosing appropriate materials that are meaningful to all students. Educators enter a classroom, just as students do, with perspectives that are characterized by their environment. Self-reflection and the exploration of personal histories to confront bias have influenced their value system (Taylor, 2010). Acquiring knowledge about one's own and other groups' cultural socializations, and how these are manifested in teaching and learning, is essential to choosing the appropriate resources for instruction. Panelists #2 explains that employing the local environment and community assets on a regular basis to link to the daily lives of the students provides a unique opportunity to build a repository of relevant resources. She further suggested that teachers lead "book talks" and "article talks" in order to share their research-based knowledge about cultural differences with their colleagues at the department or school-wide level. Panelist #6

confirms the need for accessing *resources* for professional development and understanding the needs of students.

The second approach addresses teacher professional training as a resource to transform the educational setting. Scholars noted that training infused in the daily routine of practices and instruction provides not only support for diverse populations, but also a safety net of responsiveness. Several panelists indicated that educators should incorporate cultural knowledge into ongoing professional development of the school and classroom by building relevant learning opportunities. For instance, "schools and districts make resources available for training on local ways of knowing and teaching," declared another expert. This comment implies that professional learning must become part of the daily discourse embedded within practice. Through collaboration, teachers form professional learning communities to share data and other relevant information about students to plan culturally responsive and rigorous learning opportunities for students. Another panelist said, "Educators participate, lead, and guide themselves and others in the implementation of cross-cultural social actions skills that impact thought, actions and interactions." Professional learning is designed to provide information that can help teachers increase their efficacy with students of color. The use of staff development and education explores how ones' stereotypes and prejudices prevent effective teaching, how belief systems prevent students from learning, and how to create a climate of expectancy that is favorable to the learning and teaching process.

The study emphasized the use of digital learning. Online resources provide a major resource for educators to inform the educational environment. Multiple websites regarding culturally responsive instruction have been launched to expand interaction in the classroom. Panelist #4 explained that "culturally competent educators identify the most appropriate and familiar new technology in the classroom to introduce students to culturally expanding ways of thinking, behaving, working, and interacting." Implications suggest that technology has a significant role in how instruction is delivered and the level of student interest in content. Transformative ideas broaden the scope of cultural knowledge embedded within the context of the educational environment. Educators employ funds of knowledge of themselves and students. Researchers recommend employment of funds of knowledge as the foundational support of carefully planned instruction that facilitates the actualization of culturally competent teaching (Perez & Holmes, 2010). While there is no way an educator can anticipate all student differences, routinely incorporating a variety of resources, explanations, and other engagement opportunities can reinforce instruction and establish pedagogical connections to the content (Landson-Billing, 2018). Panelist #'s 7, 8 & 9 indicated that "Educators must think of themselves as cultural border-crossers. It should be noted that there is a significant value added for teachers who are from diverse communities and can speak to issues directly based on their experience." One must look inside oneself to learn about one's own cultural lens, remain open to acknowledge bias where it exists, and do an assessment of current equity skills, accepting one's own limitations with a willingness to change. Educators must engage in reflective thinking and writing to explore

families' histories and other experiences that impact the learning environment. By doing so, they develop a mindset for purposefully acquiring culturally sensitive understanding and adapting their practices accordingly. Several panelists suggested the following practice: "Use a journal to record feelings and thoughts during the designing of lesson planning(Hanover Research, 2014).

Another *resource* identified in this study were the students themselves. Students bring a wealth of knowledge to the classroom that can serve as a foundation for instruction. Luis et. al, (1992) "refers to the historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being." In order to effectively teach, educators must learn about students' interests, lives, communication styles, and learning modes. Explained clearly: "Educators must connect with the everyday lives of students by investing the energy, the care, and the time to get to know students, create ongoing opportunities for hearing students' voices in [the] classroom, and incorporate content and discussions that honor students' lived reality (Sprott, 2014)."

Research question #3:

To what extent can a repository of resources assist in implementing effective instruction?

Effective instruction happens when the preservice teacher learns the frames of reference of his or her students. This idea asks educators to take on a role as a learner of family cultural traditions and embed that new cultural knowledge into the daily discourse of the classroom. As the learner, the preservice teacher creates culturally competent and relevant lessons that tap students' prior knowledge. Knowledge educators acquire about their students is considered "funds of knowledge." Martin (personal communication, 2013), another panelist, further states that "an educator builds on the students' backgrounds and experiences, resulting in developing relationships with students to acquire cultural knowledge of families and other groups." This practice has direct implications in terms of informing instruction.

Discussion and implications for practice

Culturally Competent Practices are anchors for informing quality instruction of standards, and they guide the lesson planning process in culturally contextualized ways. They employ cultural characteristics, experiences, and perspectives of ethnically, culturally, and linguistically diverse students as conduits for teaching more effectively. *Culturally Competent Practices* (CCP) influence teachers to evaluate a sense of self, informing those limitations and ensuring that teachers maintain a strong sense of autonomy when making instructional decisions and while infusing the cultural knowledge necessary for students to negotiate the educational environment (Taylor, 2010). Empowered educators can articulate a complex understanding of cultural differences in verbal and nonverbal communication (e.g., demonstrate an understanding of the degree to which people use physical contact while communicating in different cultures or use direct/indirect and explicit/implicit meanings) and are able to skillfully negotiate a targeted set of resources to support a shared understanding base on those differences. The five following *Culturally CompetentPractices (Resources)* were identified in this study.

As a means to explore the pertinence of this research finding to a preservice teacher population, the researcher posed a series of questions throughout a teacher education undergraduate course in secondary methods that invited candidates to discuss their understanding of cultural competence. For each of the five culturally competent practices, preservice teacher candidates' responses are listed.

1. Resources to encourage self-awareness. Culturally competent educators' colleagues must engage in ongoing journaling, virtual resources, and personal and professional development, as these activities are provisions for developing one's own cultural lens. According to Endo (2015), the preservice teacher's attitude toward diversity in the classroom shifted from deficit view to acceptance and appreciation (Hill, 2021) in everyday discourse. Likewise, preservice teachers must engage in meaningful discussions about how a person's beliefs influence educational interaction (Endo, 2015). The sample below represents the scope of self-awareness of preservice teachers.

- "Initially the virtual world was scary but now I'm using CK1 to develop Math lessons and effectively teach students".
- "I'm excited about reaching all my students."
- "Working in groups with people who are differ gave me a new lens."
- "I thought this Flipgrid video was a waste of time, but it has exposed me to diverse groups of people from many races and cultures."

An educator can examine feelings and thoughts about the planning, delivery, and assessment of lessons with a trusting peer who shares an equitable lens. that teaches about the contributions, assets, and history of nonwhites will benefit all students in the educational setting.

2. *Resources to support cross-cultural skills*. Local community members, faith-based organizations, various ethnic groups, educational organizations, periodicals, newspapers, virtual collaboration tools, and service agencies constitute a repository of resources that can help to ensure educators exhibit cross-cultural skills. Since we live in a global society and are training our preservice teachers to become productive global citizens, guest speakers from all over the world can be access through ZOOM, TEAMS, and other virtual learning tools. Students can participate in international conferences and discussion with peers in other continents and countries. Cross-cultural skills reflect the integration of differentiated cultural differences to promote student engagement (Sprott, 2014). For instance, panelist #15 indicated educators must have meaningful discussions about how a person's beliefs influence educational interactions, and this is especially important when interacting with students who come from communities where education begins and ends with the concept of spirit regarding indigenous. Keengwe (2010) concludes that the teacher's understanding of the cultural context of student differences promotes equity and support of equal access and opportunities. The sample below represents the scope of cross-cultural skills of preservice teachers.

- "In my history 7-12 lesson, I utilized the PBS learning media website during the lecture section to target various ethnic groups and because

it contains informative videos which would help students with different learning styles."

- "As embarrassed as I am to confess, I didn't think student differences made a difference."
- "Completing this activity Taking this survey was an informative experience. I understand that as an educator I must ensure that every student succeeds and provide a positive learning environment. Furthermore, there must be accommodations and modifications to ELL and exceptional students.

"The various examples in this assignment e survey on how to ensure that there is no bias and that cultures are promoted and put the issue front and center. I must do more to ensure that I am knowledgeable about the various cultures and know how to effectively teach in a bias-free way."

3. Resources encourage the full potential of each student. Resources that can be used to support a student's full potential might include multiple forms of data collection to monitor progress, family systems viewed as assets, community groups, cultural groups, and Internet resources in the classroom setting. The teacher expands the curriculum beyond the representation of socio-cultural groups existing in the classroom so that students can consider their own ethnic group's history, literature, philosophy, etc. in relation to that of other groups. Likewise, preservice teachers must draw on cultural histories and authentic literature to demystify beliefs and capture cultural connections to recognize the "Heart of the Teaching" which is the student. Culturally competent teachers acknowledge that student from distinct backgrounds bring a wealth of knowledge into the classroom (Gay, personal communication, 2016; Landing- Billings, 2014) For example, a sixth-grade teacher of students who are mainly Latino, Asian American, and white, builds a curriculum that substantively draws not only on knowledge from these three broad socio-cultural groups, but also by African Americans and American Indians. Employing this technique provides a global view that transforms ethnic groups from being "cultural outsiders," (Shedrow, 2017) to find similarities with different individuals or appreciating multiple perspectives. Teachers serving as cultural brokers and interpreters of school culture for ethnically, racially, and socially diverse students are encouraging the full potential of all learners despite diverse backgrounds and value systems (Landing-Billings, 2014). The sample below represents the scope of cross-cultural skills shared by preservice teachers.

- "Accommodations for students are important therefore, I will employ Google classrooms for all students. Then I will ask students to write about their family history. Each student will have access to the length of the paper and a rubric to demonstrate the success of the assignment."
- "I am going to set the goal of learning about the struggles of students, other cultures and marginalized groups in history. There are plenty of resources online which I will utilize. Furthermore, the material that I will find can also be used in my lessons as an educator."

4. Resources to promote cross-cultural knowledge. Results revealed that the application of diverse role models, cultural groups, online resources, the local community, articles, and online resources maximizes and supports cross-cultural knowledge and can shift instruction in the classroom. For example, a teacher can network with a variety of mentors and role models in different subject areas who represent culturally and linguistically diverse groups and invite them to the classroom as guest speakers (Gay, 2000). The math teacher might recruit a diverse group of engineers to reinforce content taught throughout the year. As another example, the teacher identifies a cultural group of which at least some of his or her students are members, and about which the teacher knows little, then begins to systematically read to acquire background about this group (even if it is not entirely clear, at least initially, how this background information will be used). For example, a teacher who learns that two of her students this year are Hmong, and who responds by wondering what Hmong is, immediately begins to locate background information about Hmong history, Hmong immigration, Hmong communities in the U.S., and local Hmong resources. Accessing appropriate resources shifts one's thinking and considers how other people are connected in communities and families. Shedrow (2017) concluded that culturally competent practices and materials to honor students' background and knowledge would minimize behaviors that could interrupt classroom instruction. Teaching students how to transition from one cultural way of behaving to another to fit the demands of different settings, purposes, and interactions, such as communicative code shifting, negotiating different forms of marginality, and modifying relationship styles confirms characteristics of culturally competent educators.

The sample below represents the scope of cross-cultural knowledge confirmed by preservice teachers.

- "After this assignment, I found myself answering "I haven't thought of this" many times. I feel like this is almost unacceptable of me as a teacher. A teacher should be a role model and lead students in a positive direction. I need to do a better job of expanding my horizons. I wasn't too surprised by anything while taking this essay. Due to the current climate with covid, I have had a lack of experience in the field. I think this is the main cause of my worries and struggles."
- "I have many goals that I have set for myself in my future teaching career but one of the main ones is that my classroom makes every student feel welcomed and important. I know all my students will be coming from diverse backgrounds and I want to meet the needs of all my students so they can have the best learning experience possible. Each student that I will come in contact with willhave a different learning style that helps them learn."
- "It is my job as their educator to provide to my students multiple ways of learning to meet their diverse learning needs, become active members of the community in which they teach and make positive and culturally-appropriate contributions to the well-being of that community."

5. Resources to foster valuing diversity. Resources to ensure high quality instruction establish multicultural public officials, families, role models, books, and virtual sources as vehicles to enhance relevance, rigor, and desired outcomes of the curriculum. Incorporating multiple perspectives from student and family backgrounds and experiences strategically reinforce classroom and virtual routines. In essence, building cognitive routines fosters essential processes to reinforce new ways of thinking. Namely, caregivers, family and community members' parents are invited into the classroom to lead seminars, assist with virtual lessons if students are home and build on concepts related to instruction. According toKeengwe (2010), preservice educators must have multiple opportunities to engage in cultural experiences which can include online materials and books. Shedrow (2017) indicated preservice teachers must have the opportunity to unpack misunderstandings of cultures other than their own and embed processes to challenge ideologies and beliefs in coursework. The sample below represents a scope of valuing diversity exhibited by preservice teachers.

- "Our lessons should connect to our student's life experiences and utilize websites like the Smithsonian where we can assess information about famous people from all cultures and include it in our lessons."
- "As a future educator I will need to take certain steps to provide a culturally rich
  educational environment. I must analyze a problem the school has in relation to this and try to find a solution. This will consist of me cooperating with the other staff and reaching a compromise in the middle. As an individual I must avoid discrimination against students for whatever reason and make sure everyone receives equal treatment. Favoritism is something I will avoid regardless of who the student is. These steps will help avoid causing conflict inside the learning environment"
- "...taught her lessons that connected to our different personal experiences as student"

Conclusion

In order to achieve equity in education, pre-service teachers must build a repository of intentional resources to establish a culture of learning within the classroom. This study looks at how educators must rethink to foster a discourse of specific materials, affirm views of students from culturally and linguistically diverse backgrounds, and consider resources for learning in all students rather than viewing differences as problems to overcome. Digital *resources* are critical to integrate new ways of thinking about student-based cultural practices and experiences to improve performance outcomes. Armed with *Culturally Competent Practices*, the research framework shows teachers ways they can develop a clear sense of self, new cultural skills, and recognition of each student's potential. Using this cross-cultural knowledge, valuing diversity, and accessing strategic resources, preservice teachers are better prepared to adapt to the local context, to the cultural and racial differences they encounter, and to make necessary modifications in the educational setting.

Similarly, preservice teachers must seek ways to link students' ethnic and racial identity with instruction through online resources, cultural histories, community events and groups. Culturally Competent Practices incorporate student backgrounds, students' identities, cultures and mindset. Culturally competent educators continually develop and use specialized knowledge and understanding about the history, traditions, values, family systems, and artistic expressions of student groups that they serve. Preservice teachers must engage in meaningful discussions about how a person's beliefs influence educational interactions to become self- aware. Cross- cultural skills must entail regular classroom practices incorporating a diversity lens from an inclusive perspective. In order that each student's potential is recognized the preservice teacher must cultivate a deep belief in the intelligence of students. Invest in Indigenous knowledge, skills, and institutions within different ethnic groups and communities to secure cross-cultural knowledge. Finally, building a community of valuing diversity through accessing caregivers, family and community members, role models, and local community resources of the students served as specialized knowledge to enhance instruction.

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Bridging Enhanced Learning:
The Model for Life-Long Learning

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We are troubled as educators that little or no improvement in student achievement has taken place since *Brown v. Board of Education.* A recent paper, *Brown v. Board of* Education *to ESSA: Sixty Years of Educational Change?*(Stevens and Kraus, 2017) presented at the National Social Science Association conference concluded that in spite of large sums of money spent on technology, studentachievement has declined and continues to do so. It is therefore, not surprising that for the past twenty years, just one quarter of students have been able to demonstrate a proficient understanding of Civics on the National Assessment of Educational Progress (NAEP) Civics test (May-Dreyer, 2020, p. 1116) To address this serious issue we propose an educational program that will help teachers create conditions for learning that will ensure students fulfill their potential and meet the challengers of the 21st century; a program we call Bridging Enhanced Learning (BEL).

BEL provides the tools and techniques to create environments for significant learning experiences. The intent is to infuse "essential skills" into course content designed to identify challenges and provide for Lifelong Learning (LLL) success. One of the three components of "essential skills" are the 4C's: communication, critical thinking, collaboration and creativity. These skills we teach our students. A second component are the 4E's: enable, engage, expect, and empower; skills teachers should possess. And the final component is the ten'I'isms designed to teach students responsibility for their learning.

The 4C's

Communication

Communication is simply the act of transferring information from one place to another. This seemingly simple definition is indeed quite complex. It includes verbal, non-verbal, written, and visual communication. We ask our students in verbal communication to listen for meaning, including knowledge, values, attitudes and intentions. These meanings may in fact be transmitted via body language, dress, or gestures. When students are asked to inform, instruct, motivate, or persuade they must be aware of their audience.: Know your audience," is the old adage they learn.

Critical Thinking

"Critical thinking is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way. People who think critically consistently attempt to live rationally, reasonably, emphatically, (Foundation for Critically Thinking, p.1)." We support the notion of critical thinking by expecting our students to analyze evidence, arguments, claims, beliefs, ideas, and competing viewpoints. We teach our students the abductive reasoning. And, we remind them they will have to make judgements and decisions in the future and will solve problems in both conventional and innovative ways.

Collaboration

"Teamwork is the ability to work together toward a common vision; the ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows people to attain uncommon results-Andrew Carnegie." We worked with Chapel Hill's Early College High School program for several years. These students were certainly common people who attained uncommon results. We taught the skills for successful collaboration. Collaboration is simply two or more people (a team), working together (processes) to achieve a goal (purpose). In our case, the purpose was to solve a murder mystery. Initially, our students had difficulty working together in a collaborative setting. They needed to learn how to respond to each other's contributions while effectively working toward achieving the desired goal. Part of the process is learning how to share information with each other. This very often involves negotiations and compromise, a difficult task for 9th graders, with the outcome of shared responsibility and accountability. Eventually, they all learned how to value contributions made by each other.

Creativity

Creativity involves Bloom's highest level of cognitive thinking; synthesis. The ability to integrate a number of disparate bits of information to create a new idea, product, novel, poem, painting, interpretative dance, or play to name a few. Rollo May in *Courage to Create* (1976) writes, "Creativity is the process of bringing something new into being. Creativity requires a passion and commitment. It brings to our awareness what was previously hidden and points to new life. The experience is one of consciousness: ecstasy." We encourage our students to entertain new and diverse perspectives. In order to do this, we present five strategies for accomplishing this goal: associating, questioning, observing, networking, and experimenting. And, throughout this process, we want students to understand that they will both succeed and fail.

Teachers have a vital role to play in the learning process. By employing the 4Es: enable, engage, expect, and empower they provide the support and encouragement that motivates students to accomplish their goals. The key is that teachers place the students at the center of the learning process.

The 4E's

Engage

Teachers in the ECHS program engaged their students by fostering involvement by drawing out student's perspectives/views on this complex mystery. By encouraging students to explore a variety of possibilities or potential theories, they gave students the opportunity to present their "own" theory. Teachers who use this strategy can provide students with multiple perspectives and challenge students with difficult questions. In such a classroom, students will become more engaged and student's critical thinking will be enriched.

Expect

Lack of Expectation leads to boredom. Teachers need to set high expectations and challenge students with thought provoking questions. Questions that involve Bloom's higher cognitive levels (application, analysis, synthesis, and evaluation) are appropriate. At the end of the murder activity, students are required to present their theory, not only to the class, but the administration as well. Their creativity is both inspiring and enlightening. The "bar" is set high. We listened to poems, ballads, interviews, and observed one act plays. We all witnessed the students developing self confidence in their ability to perform.

Empower

When teachers empower their students, they give them authority to organize, plan, and execute their assignments. In the case of the murder mystery, the students used all the resources (primary source documents) to create a murder theory. This allowed them both choice and creativity. Allowing students to use their preferred learning style can be very stimulating and reinforcing writes, Dan Rae (1993, M3). Creativity is a powerful motivator that taps into the student's imagination and opens new possibilities.

The third component is'Iisms' developed by co-author Ippolito, who teaches communication at Tyler Junior College.

The 10 'Iisms'

#1. Mr. I. is not your Teacher…he is your Coach. #2. Mr. I. does everything for a reason…it's your job to figure out what he's doing and why. #3. Mr. I. does not ASSUME… when you do it makes an ASS out of U and ME.#4. Mr. I. can't make you happy or sad…..only you can do that. #5. Mr. I.'s job is to assist you being successful….not just in this course… but life.#6. Mr. I. says that to be and effective communicator…you must genuinely display these skills…they are Compassion, Empathy, Humility and Respect.#7. Mr. I says that if you don't learn anything in his class….he wants you to become Aware (Present). # 8. Mr. I likes to peel the onion (ask questions)….to get to the core of the issue….then develop consensus. 9. Mr. I. says the key to Public Speaking is understanding the concept of POWER. Finally#10. Mr. I. asks, Have you been told it is not always about you?.....This class is all about you. Simply because when you figure out who you area, that's who shows up.

These three components of "Essential Skills" provide powerful and fundamental changes in the dynamics of Lifelong Learning experiences. There, the BEL program reshapes both learners and designers of life long experiences.

In the quest for educational equity through "high stakes testing" and the often, ill- conceived educational innovations and programs to achieve that goal, we have created a generation of students and hence workers ill prepared for the challenges of the 21st Century. The Bridging Enhanced Learning (BEL) program attempts to counter this trend by providing a template and environment for Life Long Learners in both education and industry. It will assist teachers to create the conditions for learning which will ensure Life-Long Learners fulfill their potential.

What we propose is a revolution, hence imagining educational excellence that requires a review and thoughtful application of basic principles and skills that have worked well in the past. We call these Essentials Skills for Learning. Principles and skills that are not only democratic, but also pedagogically sound. These are based on the 10 Common Principles of the Coalition of Essential Schools (Ted Sizer, 1984). The New England League of Middle Schools published *Gavels to Gravestones: Seven Middle School Social Studies Activitie*s (Stevens, 1990) in its Curriculum Spotlight series. In 1998, The CES selected Gavels to Gravestones to be included in its curriculum choices for teachers. (Cushman, Kathleen. 1998, What's Out There? Curriculum that Support Essential School Ideas) Three principles of CES we find particularly salient to our purposes: Less is more: depth over coverage, Student-as-worker, Teacher - as Coach, and Demonstration of Mastery. Let's review these three principles.

Less is more: Depth over Coverage

The school's goals should be simple: that each student master a limited number of essential skills and areas of knowledge. While these skills and areas will, to varying degrees, reflect the traditional academic disciplines, the program's design should be shaped by the intellectual and imaginative powers and competencies that the student's need, rather than by "subjects" as conventionally defined. The aphorism "less is more" should dominate: curricular decisions should be guided by the aim of thorough student mastery and achievement rather than by an effort to merely cover content.

Student-as-Worker, Teacher as Coach

The governing practical metaphor of the school should be "student-as-worker", rather than the more familiar metaphor of "teacher as deliverer of instructional services." Accordingly, a prominent pedagogy will be coaching students to learn how to learn and thus teach themselves.

Demonstration of Mastery

Teaching and learning should be documented and assessed with tools on student performance of real tasks. Students not yet at appropriate levels of competence should be provided intensive support and resources to assist them quickly to meet standards. Multiple forms of evidence, ranging from ongoing observations of the learner to completion of specific projects should be used to better understand the learner's strengths and needs, and to plan for further assistance. Students should have the opportunities to exhibit their expertise before family and community. The diploma should be awarded upon successful final demonstration of mastery for graduation- an "Exhibition" As the diploma is awarded when earned, the school's program proceeds with no strict age grading and with no system of earned by "time spent" in class. The emphasis is on the student's demonstration that they can do important things.

These three principles support and sustain the BEL model created by Innovation Advancing Education (IAE), an educational consulting firm known for its innovative hybrid approach to teaching and lifelong learning. IAE created and successfully utilizes the Bridging Enhanced Learning model. Though not members of the CES, IAE's experience in teaching and collaboration with partner schools supports these three principles of democratic pedagogy. Implicit in these three principles is absolute requirement of setting expectations for students.

Teacher expectation has been reported by (Good & Brophy, 2000, p.109) as being a powerful tool in the hands of teachers, which they can use effectively to shape their students' future achievements. High teacher expectations produce high achievements for students and low expectations tend to produce low achievements (Capel, Leask & Turner, 1995; Sadker& Sadker,1988; Brookover et al., 1982). This issue is important because the ability of young children to learn and become educated is largely in the hands ofteachers and many of the teachers may be unaware of the important influence that their expectations can have. Researchers found that younger children are more susceptible to teachers' expectancy effects

(Jussim&Harber, 2005; Raudenbush, 1984) than students in higher grades, as they see themselves in the eyes of others *Department of Education, Monash University Melbourne, Australia. Teacher Expectations, Students' Motivation 46 (teachers, parents and other adults) and form self-images. With high expectations they are more likely to form positive self-images and with low expectations their self-image is lowered. Such self-images may well remain with them for the duration of their lives affecting their future achievement (Velez, 2006). This suggests a close correlation between teachers' expectations, self-perception and their students' life-long achievements. Researchers have discovered a cyclical pattern between teachers' expectations and students' achievements (e.g. Atwell, 2001; Brookover et al., 1982; Good & Brophy, 2000; Jussim, 1986; Jussim et al., 2005; Jussim&Harber, 2005). They report that teachers' expectations can greatly influence students' achievements. From the past 35 years, after the publication of 'Pygmalion in the classrooms' by Rosenthal and Jacobson (1968), researchers have been trying to explore how teachers communicate their expectations to their students and how these impact on their students' achievements. "Overall, research on student's reactions to teachers' expectations from 2008-2018 has shown that students react to teachers' differential treatment or expectations in ways that differentially affect their educational outcomes (Johnston, Oliva, et al, 2019).

However, this paper will provide some fresh insights related to teacher's expectations, motivation and self-perception. It also provides a framework for teachers to organize and develop appropriate motivational strategies to enhance their students' self-perception.

Steps for Setting Student Expectations

- Determine what your expectations for the class will be. You may want to speak to the students and get their help on creating the classroom rules. ...
- Let the students know what the rules and expectations are on the first day of class. It would also be wise to communicate your expectations to their parents. ...
- Be sure to model your expectations for the students. Let them see what you expect of them, and provide them with opportunities to practice them.
- Establish your credibility by showing your enthusiasm for your subject. Let your students know how excited you are for them to learn in your class. ...
- Consistently reward good behavior and address negative behavior. And don't ignore actions that go against the rules. You need to enforce the rules every day for every student. Period.
- Get to know your students. Make the effort to memorize their names within the first day or two of class. ...
- Get feedback from your students. So, feel free to ask them about their expectations for the teacher! And find out how they think you're doing and how class is going (Bulletin of Educational research, 2009, pp. 554-60).

Researchers argue with each success at school children have enhanced sense of motivation and self-perception (Blatchman, 1992). In contrast, with each failure at school children feel demotivated and develop a low self-perception for themselves (Chapman, 1988). The findings of the study suggest that self-perception, motivation and teacher expectations are interrelated. Research has found that teachers influence students' motivation through provision of experiences and communication of beliefs and expectancies (Green, 2002). Student-teacher interaction is also important in this regard. Teachers can motivate their students by boosting their self-perception, which is imperative to perform better (Lindsay &Dockrell, 2000). Researchers (e.g. Leondari&Kiosseoglou, 1998) have attempted to establish some link between self-perception and motivation. They state that realization of self is a key factor in motivational behavior. Students' motivation to engage in a task is also influenced by the conception they hold of themselves (Jennings, 1993).Positive self-perception to sustain motivation is important for the students to expend effort to complete a task(Velez, 2006). This study reveals teacher expectation plays a significant role in developing these real selves and motivational behaviors in children particularly at primary school level. This study is concerned with teachers' expectations about students' achievement. Previous research

suggests that teachers teaching styles are affected by the kind of expectations they hold for their students (Rosenthal & Jacobson, 1969). Most of this research has been conducted in state school,Rizwana 47, settings but very little of this research compares teacher expectations in private school settings with teacher expectations in state school settings. The theoretical framework of this study suggests that there is a strong correlation between teacher expectations and student achievements (Broke over et al., 1982; Good & Brophy; 1997, 2000; Jussim, 1986; Jussim&Harber, 2005). Students' achievements may confirm teacher expectations because these expectations create self-fulfilling prophecies (Jussim, 1986; Jussim&Harber, 2005). Teachers adjust their (Cooper, 1986; Diamond, Randolph & Spillane, 2004; Good & Brophy, 2000; Sadker&Sadker, 1988), thus setting the stage for self-fulfilling prophecies to come true. Students, upon recognizing their teacher expectations, behave in a way that confirms to their teacher's expectations (Atwell, 2001; Brookover et al., 1982; Good and Brophy, 2000; Jussim, 1986; Jussim et al., 2005; Jussim&Harber, 2005). Thus, teacher expectations can strongly influence students' achievements. What do teachers understand by the notion of 'expectations'? The purpose of my study is to explore and describe how teachers in independent school settings in Melbourne form expectations of their students, whether they believe these expectations affect student achievement, and how these teachers attempt to communicate their expectations to students. This study intends to address the following questions to understand in depth the phenomena of teacher expectations.

What expectations do they have of their students?

How do teachers form these expectations?

What factors affect their expectations?

How do teachers communicate their expectations?

What do they understand to be the relationship between teacher expectations and student achievement?

How do teachers believe they enact their expectation?

IAE's program developing Essential Skills is Bridging Enhanced Learning (BEL). Our comprehensive program provides tools and techniques which are customized to fit Lifelong Learners in Elementary, Middle, High School and Homeschoolers as well as applications for business and industry settings. These "Essential Skills" provide powerful and dynamic fundamental change. Therefore, the BEL program reshapes both learners and designers for lifelong learning experiences.

Bridging Enhanced Learning (BEL), a 21st century skills program developed by IAE, is based on the idea that Essential Skill development begins as a young child, continues throughout the learner's adult life, and is primarily within the context of Emotional Intelligence (EI) as defined by Goleman (1995). BEL will incorporate the following key components: a pre-assessment utilizing Artificial Intelligence (AI) technology, curriculum designed to be taught in a project-based location or a work-based learning location, and the learner receives a micro-credential upon completion. It is anticipated that, taken together, these components will have the potential to improve the learner's 21st-century skills, which in turn could help move the needle on educational outcomes, college completion (degree or certificate) and career success.

Specifically, The BEL-Essential Skills program will develop the following deliverables, each associated with a set of specific practices, activities and elements.

1. Pre-assessment will be based on current research that shows that most essential skills are very difficult to effectively evaluate in traditional methodologies. A recent analysis by McKinsey Global Institute shows that many Essential Skills are defined as necessary for societal challenges, and are currently being effectively supported and evaluated by various Artificial

Intelligence (AI) programs. The analysis cites several Essential Skill areas such as ethics and equality, teamwork to support established goals, creativity and innovation, specific educational instruction and good health and well-being. IAE knows that learners and employers will want the most comprehensive and accurate assessments available to determine if the learner has, if fact, mastered the given Essential Skill set. We believe Artificial Intelligence (AI) is the best option available to accomplish this.

2. Direct Instruction will be based on the results of the pre-assessment. The instruction is delivered utilizing the best pedagogical (theory and practice of education) methods within an adult education framework (andragogy). Andragogy is not as familiar as pedagogy but probably has more relevance to this project.

The following characteristics of adult learners (andragogy) are somewhat different from the characteristics of child learners (pedagogy).

Self-Concept: As a person matures his/her self-concept moves from one of being a dependent personality toward one of being a self-directed human being.

a) Adult Learner Experience: As a person matures he/she accumulates a growing reservoir of experience that becomes an increasing resource for learning.
b) Readiness to Learn: As a person matures his/her readiness to learn becomes oriented increasingly to the developmental tasks of his/her social roles.
c) Orientation to Learning: As a person matures his/her time perspective changes from one of postponed application of knowledge to immediacy of application. As a result, his/her orientation toward learning shifts from one of subject- centeredness to one of problem centeredness.
d) Motivation to Learn**:** As a person matures the motivation to learn is internal.

Direct Instruction in each Essential Skill will be organized around the five characteristics of Emotional Intelligence (EI).

These are:

- Self-Awareness
- Self-Regulation
- Motivation
- Empathy
- Social Skills

Criteria for skill mastery will be determined by best practice research as well as collaboration with the various stakeholders and potential customers. Location for the direct instruction could be provided within a learner's home, college classroom or employment setting.

Post instruction assessment will be based on mastery of skills instruction utilizing the Artificial Intelligence (AI) technology. Further learner review and final determination of skill completion will be decided based on a progressive rubric of skill attainment.

Micro-credentials are certifications indicating demonstrated competency in a specific Essential Skill. They are personalized and self-directed, focused on the learner needs, competency based and job embedded. It is anticipated that criteria for learner competency will be developed based on

stakeholder input. It is also anticipated that an issuing entity will need to be established or identified to provide quality assurance for the micro-credential.

Once a general agreement has been reached to proceed with this proposed project, IAE will develop and present a detailed timeline for implementation.

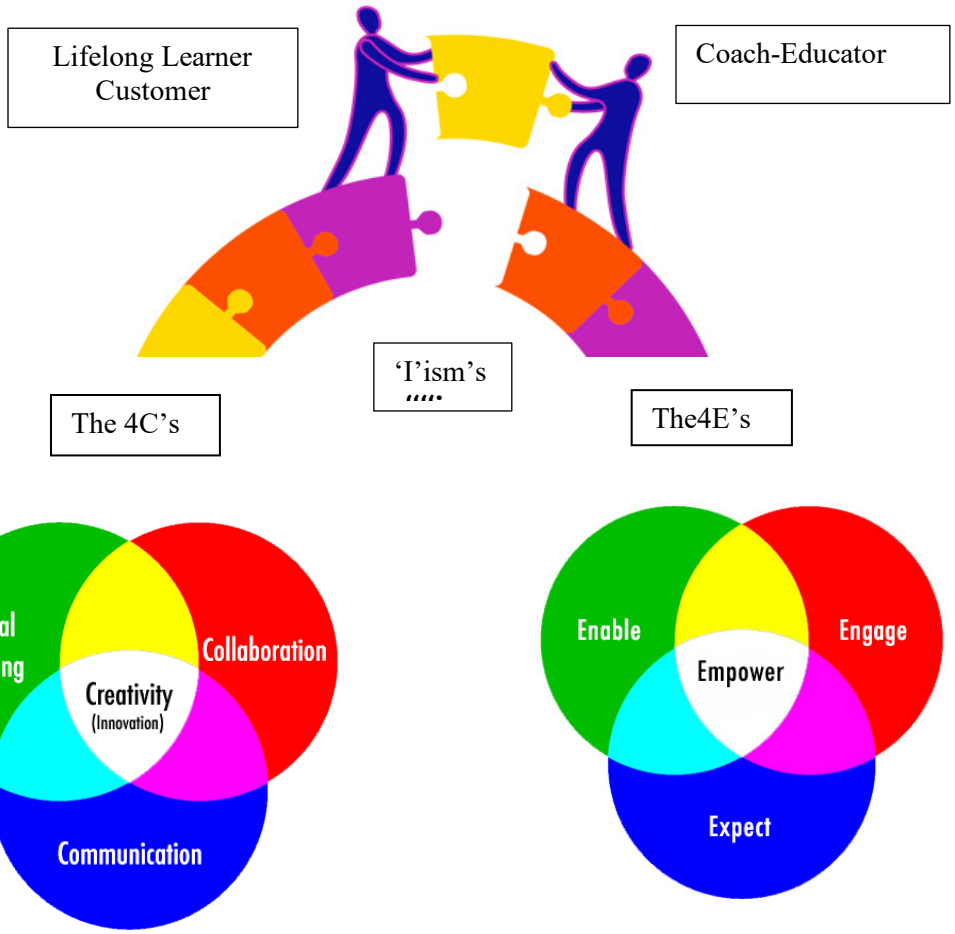
In conclusion, students do know what they are willing to do. Further, they are unlikely to learn anything of positivevalue from tasks they do not do or assignments they see of little value. Moreover, if they are to learn what teachers, parents, and the larger community want them to learn, they must be motivated to do the work and engage in activities that will result in learning. If the work the schools the school provides does not engage the students for whom it is intended the schools will not produce learning. If the work does provide does not engage the students for whom it is intended, the schools will not produce learning any more than manufacturing concern that creates a product customer will not buy and will not make a profit.

A second and equally important measure of measure of quality is what happens to a student as a result of doing work the school provides. Quality school work is work through which a student develops skills, attitudes, understandings, and habits of mind that are valued by adult members of society. Children are not adult, but the quality of their experiences they have in a school will go far in determining the kinds of adults they will be. They do not know what they need to learn but they know what they are ready, able, and willing to do. Children, and adults, learn best when they want to achieve some end that is not possible without developing new skills, new understandings, new attitudes, and new habits of mind.

IAE's program developing Essential Skills is Bridging Enhanced Learning (BEL). Our comprehensive program provides tools and techniques which are customized to fit Lifelong Learners in Elementary, Middle, High School and Homeschoolers as well as applications for business and industry settings. These "Essential Skills" provide powerful and dynamic fundamental change. Therefore, the BEL program reshapes both learners and designers for lifelong learning experiences.

Introducing the Model

Bridging Enhanced Learning (BEL)



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