Resiliency and Academic Achievement Among Urban High School Students

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Abstract

This study investigated Resiliency for Academic Success factors and their possible impact on student achievement among urban high school students, focusing on multiracial students (Trueba, 2002). Educational researchers have investigated reasons for underperformance in academics among students of color. The finding indicates that some students, specifically students of color, have barriers that are often outside of their control, impacting learning. Barriers to student learning, such as poverty, child abuse, and drug and alcohol addiction, may explain some children's academic underperformance (Bernard, 1993). However, students may possess resiliency factors that protect them against adverse conditions (Trueba, 2002).

Keywords: Resiliency, academic achievement, multiracial, achievement gap, urban high schools

The National Commission in Educational Excellence (1983) issued *A Nation at Risk (ANAR),* which provided an analysis of underperforming students in U.S. schools. The report claimed the current educational system in the United States was cultivating "mediocrity" among students and subsequently "threatening our very future as a Nation and a people" (National Commission in Educational Excellence, 1983, p. 33). *A Nation at Risk* was the first report that revealed public schools were dealing with challenges such as "deterioration with scholastic aptitude" among students (National Commission in Educational Excellence, 1983, p. 11). Also, *A Nation at Risk* established the federal government's interest in public education (National Commission in Educational Excellence, 1983). Following *A Nation at Risk*, the federal government implemented the No Child Left Behind (NCLB) Act of 2001. NCLB increased the federal government's

authority on public education, assuring states measure student progress by testing students (Bradley, Meyers, Curtis, & Kessinger, 2018).

The No Child Left Behind (NCLB) Act of 2001 guidelines requested educational leaders to examine achievement data according to students' gender, racial background, socioeconomic status, and (if applicable) disability. The NCLB Act encouraged school leaders to create and provide academic interventions to students not making Adequate Yearly Progress (AYP) in reading and mathematics; otherwise, schools received sanctions (Dufour, Dufour, Eaker, & Karhanek, 2006). The possibility of sanctions from the state and the federal government intended to motivate school leaders to close the academic achievement gap between White students and those of color (Wasonga & Christman, 2003). After the NCLB Act of 2001, the federal government continued its influence in public education with a focus on the academic achievement gap between Black, Hispanic, and White students by adopting legislation initiatives such as the Race to the Top Act of 2009 and Every Student Succeeds Act of 2015. Scholars have found that Black and Hispanic students dwelling in urban areas may experience higher levels of the following adverse conditions: living below the federal poverty line, born in single-parent families, and residing in neighborhoods with high crime rates (O'Connor, Mueller, & Neal, 2014). One category that may endure adverse conditions compared to people of color are multiracial students (Howard, 2018). Multiracial is defined as an “individual that belongs to two racial groups” (Harris, 2003, p. 2). According to Howard, multiracial students may receive more infractions, repeat grades, and have lower school attendance than students belonging to one racial group. Howard's study found an overrepresentation of multiracial children in the area of school discipline. De Brey et al. (2019) found that

multiracial students had the third highest out of school suspension rate only behind Blacks and Native Americans. The population of multiracial students continues to increase in the U.S. and their educational experiences may be as challenging as students of color, which may inspire school leaders to examine resiliency in multiracial students (Rockquemore & Burnsma, 2008; Wang, Haertel, & Walberg, 1997). Scholars have theorized that students may mitigate adverse conditions if they possess resilience characteristics and apply them in their daily lives (Brooms, 2019; Trueba, 2004).

Purpose

The purpose of this study was to explore the six attributes of the Resiliency for Academic Success Framework (Trueba, 2002) and their relationship to academic achievement. Student achievement was based on the Prairie State Achievement Exam (PSAE) scores among urban high school students with a primary focus on multiracial students. PSAE is a statewide standardized exam for public high school students (Prairie State Achievement Examination, 2013).

Achievement Gap, Multiracial Students, and Resiliency for Academic Success

This section of the article addresses literature on the achievement gap, multiracial students, and Resiliency for Academic Success Framework. The researcher will provide an overview of the achievement gap, challenges of multiracial students, and the Resiliency for Academic Success Framework.

Achievement Gap

Educational researchers have been seeking ways to close the achievement gap between students of color and White students. According to Carnoy and Garcia (2017), "considerable evidence suggests race continues to be an important factor in explaining

the achievement gap" (p. 2). For example, de Brey et al. (2019) discovered a 26-point reading achievement gap between White and Black students in the 4th grade and a 23-point gap between White and Hispanic 4th-grade students. The same study found a comparable achievement gap between 8th grade White and Hispanic students of 26 points. Eighth grade White and Black students had a math achievement gap of 25 points (de Brey et al., 2019). There are severe long-term life consequences for students who fall behind academically. Barton & Coley (2010) noted that the achievement gap negatively impacts students of color over their lifetime. Students of color who are academically behind their peers are at risk of experiencing higher levels of crime, unemployment, and lower wages (Ladson-Billings, 2006). Gloria Ladson-Billings (2006) considers these indicators as the debt students pay for not receiving a quality "education." Education "debt" is more likely to occur when students of color attend school districts that receive fewer financial resources compared to White suburban students (Ladson-Billings, 2006). Desai (2017) discovered that students in the Chicago Public School, where 85 percent of the population are students of color, receive 34 cents less per student ($500 million) when compared to students attending schools outside of Chicago where 58 percent of students are White. Scholars also posit that a correlation exists between the level of educational resources students receive and lifetime income levels (Hanuskek, Peterson, Tapley, & Woessmann, 2019).

School leaders continue to pursue educational programs, such as culturally responsive teaching, to reduce the achievement gap between White students and students of color (Gay, 2000). Educators have used specific external conditions, such as living below the federal poverty threshold for a family of four, to rationalize lower academic

achievement among students of color (Morissey & Vinopal, 2018). Educational scholars have investigated protective indicators' research to minimize or substantially mitigate the achievement gap between White students and students of color (Brooms, 2019; O'Connor, Mueller, & Neal, 2014). Benard (1991) discovered certain resilient indicators or characteristics that might support students of color to triumph over the obstacles they face outside of school, thereby impacting their learning. According to Benard (1995), social competence is a resilient, protective factor for children. Benard (1995) defines social competence as the "ability to elicit positive responses from others," and resilient students have this ability to form healthy relationships with adults and peers (p. 45). Resilient students' ability to formulate positive relationships helps solidify a bond between "home, school, and community" (Benard 1991, p. 7).

Multiracial Students

Interracial marriages have increased among U.S. citizens since the Supreme Court Case of *Loving v. Virginia,* 1967, which legalized interracial marriages (Daniel, Kina, Dariotis &Fojas, 2014). As interracial marriages have increased, so has the number of multiracial children attending U.S. schools. As the multiracial student population increases, educators are trying to determine how to best meet the social-emotional and academic needs of these students (Howard, 2018). In 2011, 1.2% of all public school students classified their racial background as multiracial. However, within seven years, the multiracial student population increased to 3.1% for all public schools in the United States (de Brey et al., 2019). The increase in enrollment of multiracial students has caused some researchers to explore school experiences for this student population (Wallace, 2004). These students may experience challenges or hardships that are unique

compared to other students of color. Wardle and Cruz-Janzen (2004) state multiracial students received questions from peers or teachers such as, "What are you?" This question directed at a multiracial student may suggest that they have to reject or choose between their two racial groups (Wardle & Cruz-Jansen, 2004). Quillian and Redd (2009) discovered multiracial students might be isolated from their peer group when they solely identify with one racial group. For example, a multiracial student with one Hispanic and one Black parent identifies as only Black, may experience isolation from Hispanic peers. According to Quillian and Redd (2009), multiracial students have difficulty with identity formation, which may symbolize a lack of acceptance by peers or friends. The researchers examined friendship networks of multiracial students using a data set from the National Longitudinal Study of Adolescent Health from 1997. The sample size totaled 65,174 students from all races, which included 4,482 multiracial, 38,821 Whites, 10,101 Blacks, 3,390 Asians, 955 Native Americans, 6,089 Hispanics, and 976 other Non-Hispanic adolescents. According to Herman (2004), multiracial students may experience racism from both groups or deny one of their racial categories to gain acceptance among a single racial group. As previously noted, resiliency characteristics may support students of color with overcoming obstacles or hardships; however, limited research exists examining the possible impact resiliency characteristics have on multiracial students. In this study, Trueba (2002) delineates that resiliency is purposeful and advances based on an idea with intentional outcomes.

Resiliency for Academic Success

Resilience is the "ability to confront and resolve problems and the capacity to utilize personal or social resources to enhance limited possibilities" (Garza, Trueba, &

Reyes, 2004, p. 11). Trueba (2002) created a resiliency framework based on his personal and professional experiences as a poor Hispanic immigrant as well as a researcher. His life experiences became the catalyst for his resiliency research. Trueba focused his resiliency work on Hispanic students residing in Houston, Texas.

The first Resiliency for Academic Success concept, "intelligent planning in the pursuit of major goals, delaying gratification for the sake of future rewards," is the basis for all other resiliency characteristics in Trueba's framework (Trueba, 2002, p. 3). While studying academically successful Hispanic students in Houston, Trueba discovered that these students might become academically socialized. Scholars have defined academic socialization as "attitudes, values, goals, expectations, and beliefs about education as well as opportunities and activities" (Sonnenschein, Metzger, & Gay, 2018, p. 41). When students acquire academic socialization, they have the capacity and motivation to create "intelligent plans" to attain their "future goals" (Trueba, 2002, p. 3). For example, academically socialized students that have future goals may elect not to work a job while attending high school to focus on their homework. According to Duckworth (2016), "any successful person has to decide what to do in part by deciding what not to do" (p. 67).

The second Resiliency for Academic Success concept is a "willingness to learn a new language and culture" (Trueba, 2002, p. 3). During Trueba's research, he discovered that learning occurs when families experience social activities together, and these experiences may provide students with a learning framework to use in school. Students who are willing to learn a new language are more likely to learn new things, including school culture. Every student needs to learn and integrate into the school culture as it is "influenced by the school's pupils and their social class background" (Stoll, 2000, p. 10).

Students must first understand the normative culture of society and the school culture within the context of the dominant culture (Hallinger & Leithwood, 1996; Trueba, 2002). Trueba hypothesized that successful students could combine their native culture and communication with the school's culture and academic language, which may increase the student's social competence.

Another Resiliency for Academic Success concept is the "ability to use multiple personal identities in the process of communicating with others" (Trueba, 2002, p. 3). Trueba (2004) discovered through his ethnographic study of Hispanic students that students could increase their resiliency if they were able to understand the culture of the school and other racial groups. When Hispanic students in Trueba's study were able to accomplish this cultural understanding, they overcame challenges such as communicating in a different language during school. According to Wasonga (2004), students overcoming such challenges or barriers develop the "psychological flexibility necessary to pass for or assume different identities for the sake of survival" (p. 31). "Psychological flexibility" may help students, specifically underrepresented groups, increase their "resiliency and cultural capital" (Wasonga, 2004, p. 31). Many educators assume students possess "cultural capital" when they appear in school (Sullivan, 2001, p. 893). In Trueba's (2004) research, he examined a population of Hispanic students that attended white culturally normed schools in the Rio Grande Valley in South Texas. Trueba discovered in his study that students who were able to assimilate into the school environment had acquired cultural capital. Bourdieu (1977) defines cultural capital as knowledge of the dominant cultural conventions in an organization. Trueba (2004) revealed through his studies that Hispanic students possess a unique culture within their families, and acquire a

separate and different culture from their school experience. Trueba (2004) claimed when students of color combine their home and school culture; they learn "cultural capital," which provides them the necessary skills to navigate the school setting. Sullivan (2001) affirmed students of color gain cultural capital by understanding the dominant culture in school and society, which may lead to using an academic language in school.

The fourth Resiliency for Academic Success concept is the "ability to appreciate and use family support during crises" (Trueba, 2002, p. 3). Ferrer (2011) posits that most students, including students of color, academically and socially benefit from discussing school topics with their parents or family members. According to Wang, Haertel, and Wahlberg (1994), students of color that can have candid discussions about school and school-related activities with family members may overcome conflicts or trouble experienced at school. Trueba (2002) elaborates on the family support concept by claiming that family support for students provides a great source of stability and strength. Students learn to appreciate their family and share things in their life that are positive as well as negative.

Furthermore, students learn not only to receive help from their family, but they learn to help family members in need as well. Through this strong family bond, students transfer the skill of helping others to the academic setting. Students discover that in an educational environment, "learning is a social process" where students share and discuss learned aspects with others. Students' acquired ability to share, communicate, and help others makes their family bond as well as their capacity to deal with adversity stronger (Trueba, 2002).

Trueba's (2002) fifth element of the Resiliency for Academic Success Framework is loyalty to school and family and the wisdom to pursue academic excellence with the love and support of teachers. The premise of this resiliency factor is that students of color, like any students, will encounter "failures and difficulties" during their school experience, and they will need adults from school and home to provide "moral" support (Trueba, 2002). Smith and Carlson's (1997) research examined stress, coping, and resiliency among high school students. The researchers found that student relationships with one parent and one adult from an external system such as a teacher or school social worker promote resiliency (Smith & Carlson, 1997). Specifically, Smith and Carlson's research found that students of color may acquire resiliency when a parent and a school representative collaborate on the child's specific needs, such as self-esteem. The student-teacher link for students may create an additional level of resiliency that will contribute to their academic success (Trueba, 2002).

The sixth Resiliency for Academic Success factor is "spiritual strength based on religious, cultural, and linguistic values" (Trueba, 2002, p. 3-4). According to Trueba, spirituality supports resilient elements as spirituality provides students with a private premise that a deity will provide support and "take care" of all loved ones and the student. Spirituality will help the student stay healthy and "loyal" to educators, peers, and family as well as help the student make the best decisions (Trueba, 2002). Trueba claims that while spirituality is the basis for all other forms of resiliency, only when all six aspects come together, the student can reach "assisted performance and the Zone of Proximal Development" (Vygotsky, 1978, p. 32) in realizing his/her "new self through resiliency" (Trueba, 2002, p. 4). Research produced by the National Study of Youth and

Religion revealed that a positive relationship exists among the influences of "religious practices, services, and attendance" (Regnerus, Smith & Fritsch, 2003, p. 14) and academic achievement. Vygotsky (1978) stated that the Zone of Proximal Development for students occurs when a student has knowledge that is not developed but is in the early stages of development.

Methods

A quantitative study was used for this research. The study focused on examining three null hypotheses.

Null Hypothesis 1: There are no relationships among Resiliency for Academic Success indicators as measured by Intelligent Planning, Delaying Gratification for the Sake of Future Rewards, Willingness to Learn a New Culture, using Multiple Personal Identities in the process of Communicating with Others, Ability to Appreciate and use Family Support During a Crisis, Loyalty to School and Family, the Wisdom to Pursue Academic Excellence with the Love and Support of Teachers and Parents, Spiritual Strength based on religious, cultural and linguistic values and academic achievement (PSAE Scores in Reading and Math).

Null Hypothesis 2: There are no differences in academic achievement (PSAE Scores in Reading and Math) among White, Black, Hispanic, and multiracial urban high school students.

Null Hypothesis 3: There are differences in Resiliency for Academic Success indicators as measured by Intelligent Planning, Delaying Gratification for the Sake of Future Rewards, Willingness to Learn a New Culture, using Multiple Personal Identities in the process of Communicating with Others, Ability to Appreciate and use Family Support

During a Crisis, Loyalty to School and Family, the Wisdom to Pursue Academic Excellence with the Love and Support of Teachers and Parents, Spiritual Strength based on religious, cultural and linguistic values among Whites, Blacks, Hispanics, and multiracial urban high school students.

Participant Characteristics

The researcher sent requests to 25 large school districts *(N* > 1,000*)* within a 50-mile radius of Chicago because student populations are racially diverse. Table 1 illustrates the demographics of the two school districts that agreed to participate in the study, as well as the 23 that declined participation. The researcher was able to secure the Prairie State Achievement Examination (PSAE) scores for all 11th and 12th-grade students from the 2012-2013 school year. Student scores were listed by state identification numbers to maintain their anonymity. The PSAE is a graduation requirement for students in the 11th and 12th grade in the state of Illinois and measures reading and math achievement. The racial backgrounds of total students were the following: White *(n* = 136*),* multiracial *(n* = 85*),* Hispanic *(n* = 82*)*, Black *(n* = 31*)*, and 23 students elected to not identify their racial group. The sample included 203 female and 174 male students. As part of this research, socioeconomic status was not controlled as the focus of the research pertained to student racial groups.

Table 1

Solicited School Districts for Research and Sample by Racial Group

	Participant School District 1	Participant School District 2	Solicited School Districts *(N* = 23*)*
Total Enrollment, Grades 9-12	1,884	8,019	113,367
Student Demographics by Percent			
White	54.3	58.2	49.3
Black	14.5	11.1	9.3
Hispanic	12.3	22.0	26.9
Asian	15.2	9.5	9.4
Multiracial	3.3	3.5	4.8
Native-American	0.3	0.1	0.3

Note. (n = 25*) school districts were solicited to participate in the study. (n* = 2) *school districts consented to participate in the study.*

Sampling Procedures

Five of the high school assistant principals provided the Prairie State Achievement Examination (PSAE) results from the 2012-2013 school year in Reading and Math based on student identification numbers given to the researcher. The researcher received student roster sheets listed by state identification numbers for all junior or 11th graders and senior or 12th graders status from each high school. The researcher randomly selected *(n* = 200*)* 11th and 12th grade students from each school and provided the assistant principals with a list of students to inquire about participation (Trochim & Donnelly, 2008). The sample size goal was to secure 1,000 total or 200 students from

each high school, but only 52% responded to the survey. Out of 521 survey respondents, only 377 students took the Resiliency for Academic Success survey. The researcher did not have PSAE results for 144 students, so their survey results were eliminated from data calculation. Students may not have PSAE results for a myriad of reasons, such as being absent due to an illness or attending a different school during the testing window.

Data Collection

The five assistant principals from each high school visited the students in their study halls, a non-academic course, and distributed an informational letter, parental permission form, and student assent and consent forms. Once the permission forms were collected, the school administrators coordinated an appropriate day in the study hall for students to take the survey. If the students were 18 years of age, they could sign the student consent form themselves. If they were under 18 years of age, students were asked to sign a student assent form, which was paired with the parent/guardian consent form. The Institutional Review Board approved all generated permission, consent, and assent forms from Northern Illinois University.

Instrumentation

The survey instrument had 36 questions requiring a set of two responses. The survey instrument is located in the Appendix section of this article. Part one of the tool had 29 questions about Resiliency for Academic Success indicators and used a four-point Likert scale response ranging from one to four. A pilot study was completed using a survey instrument with urban high school students *(n* = 58*)*, and coefficient alpha indexes of internal consistency for the six Resiliency for Academic Success indicators ranged from 0.49 to 0.78. Typically, "validity coefficients of most instruments" are in the range

0.4-0.6 (Rocco & Hatcher, 2011, p. 186). However, this survey's reliability levels may provide insight into the lack of evidence substantiating the relationships and differences with Resiliency for Academic Success Indicators and academic achievement among student racial groups. Students were asked 29 questions about Resiliency for Academic Success. They used a four-point Likert scale response ranging from one to four, *strongly agreed (4), agreed (3), disagreed (2), or strongly disagreed (1).* Also, the investigator was able to place PSAE reading and math scores, as well as survey results into Statistical Package for the Social Sciences IBM SPSS (Version 22).

Results

The first null hypothesis was examined for White, Black, Hispanic, and multiracial students. As shown in Table 2*,* the null hypothesis for multiracial students *(n* = 85*)* is rejected for the independent variable, Ability to Use Family Support During Crises and the dependent variable, PSAE Math, (*r*(83) = .308*, p* = .016*)*. The effect size for this correlation was *(d* = .09*).* A weak positive relationship existed between the two variables. Also, the first null hypothesis was rejected for the independent variable, Loyalty to School and Family and Wisdom to Pursue Academic Excellence and dependent variables PSAE Math (*r*(83) = .324*, p* = .011*)* with an effect size of *(d* = .10*)* and PSAE Reading (*r*(83) = .326*, p* = .010*)* with an effect size of *(d* =.10*)*. A weak positive relationship existed between the two variables.

As shown in Table 2*,* the first null hypothesis was accepted among multiracial students *(n* = 85*)* for the independent variables (Intelligent Planning, Delaying Gratification for the Sake of Future Rewards, Willingness to Learn a New Culture, using Multiple Personal Identities in the process of Communicating with Others, the Wisdom to

Pursue Academic Excellence with the Love and Support of Teachers and Parents, Spiritual Strength based on religious, cultural and linguistic values) and the dependent variables (academic achievement as measured by the PSAE in Reading and Math).

As shown in Table 3 and Table 4, the first null hypothesis was rejected among Whites *(n* = 136*)* and Hispanics *(n* = 82*)* that there are weak positive correlations between Resiliency for Academic Success indicators (Intelligent Planning and using Multiple Personal Identities in the process of Communicating with Others) and the dependent variables (academic achievement as measured by the PSAE in Reading and Math). Whites (*n* = 136) also had a weak positive correlation between Resiliency for Academic Success indicator (Loyalty to School and Family). The null hypothesis was accepted among Whites (*n* = 136) for the remaining Resiliency for Academic Success indicators and the dependent variables (academic achievement as measured by the PSAE in Reading and Math).

As shown in Table 5, the first null hypothesis was rejected among Blacks *(n* = 31*)* for the independent variable, Intelligent Planning Delaying Gratification for the Sake of Future Rewards, and the dependent variables, PSAE Math, (*r(*29) = .345*, p* = .067*)* with an effect size of *(d* = .12*)* and PSAE Reading, *(r(*29*)* = .504*, p* = .017*)* with an effect size of *(d* = .254*)*. The first null hypothesis was accepted among Blacks *(n* = 31*)* that there are no significant correlations between Resiliency for Academic Success indicators (Willingness to Learn a New Culture, using Multiple Personal Identities in the process of Communicating with Others, Ability to Appreciate and use Family Support During a Crisis Loyalty to School and Family, the Wisdom to Pursue Academic Excellence with the Love and Support of Teachers and Parents, Spiritual Strength based on religious,

cultural and linguistic values) and the dependent variables academic achievement (PSAE Scores in Reading and Math).

Table 2

Correlation of Resiliency for Academic Success Variables for Multiracial Students (n = 85)

Resiliency character-istics	*N*	*M*	*SD*	(RM) Math	(RP) Reading	RA	SS	LFS	FS	MP	WL	IP
Math PSAE	85	160.42	14.3									
Reading PSAE	85	162.85	13.9	.713**			.					
RA	85	3.02	.38	.262	.249							
SS	85	2.68	.79	.193	.154	.814**						
LFS	85	3.21	.49	.324**	.326*	.732**	.435**					
FS	85	3.24	.47	.308*	.277*	.791**	.607**	.640**				
MP	85	2.88	.46	.001	.012	.569**	.341**	.195	.192			
WL	85	2.98	.49	.175	.211*	.634**	.336**	.395**	.290**			
IP	85	3.31	.48	.197	.180	.643	.462**	.599**	.500**	.237*	.417**	1.0

Note: **Correlation is significant at the 0.01 level (2 tailed) *Correlation is significant at the 0.05 level (2 tailed). IP= Intelligent Planning; WL=Willingness to learn; MP=Multiple personal identities; FS=Family support; LFS=Loyalty to family and school; SS=Spiritual strength; RA=Resiliency average; RP=Resiliency Reading PSAE; RM=Resiliency Math PSAE

Table 3

Correlation of Resiliency for Academic Success Variables for White Students (n = 136*)*

Resiliency character-istics	*N*	*M*	*SD*	(RM) Math	(RP) Reading	RA	SS	LFS	FS	MP	WL	IP
Math PSAE	136	162.38	14.8									
Reading PSAE	136	164.33	14.5	.804**								
RA	136	2.97	.34	.150	.167							
SS	136	2.51	.79	-.052	.052	.580**						
LFS	136	3.18	.55	.181	.184*	.596**	.110					
FS	136	3.32	.44	.091	-.002	.466**	-.004	.420**				
MP	136	2.77	.55	.142**	.160**	.739**	.328*	.180*	.040			
WL	136	2.89	.57	.144	.132	.674**	.115	.221**	.098*	.700**		
IP	136	3.39	.43	.197*	.184*	.541**	.166	.616**	.287*	.213*	.366*	1.00

Note: **Correlation is significant at the 0.01 level (2 tailed) *Correlation is significant at the 0.05 level (2 tailed). IP= Intelligent Planning; WL=Willingness to learn; MP=Multiple personal identities; FS=Family support; LFS=Loyalty to family and school; SS=Spiritual strength; RA=Resiliency average; RP=Resiliency Reading PSAE; RM=Resiliency Math PSAE

Table 4

Correlation of Resiliency for Academic Success Variables for Hispanic Students (n = 82)

Resiliency Character-istics	*N*	*M*	*SD*	(RM) Math	(RP) Reading	RA	SS	LFS	FS	MP	WL	IP
Math PSAE	82	156.66	14.4									
Reading PSAE	82	157.68	13.5	.685**								
RA	82	3.10	.46	.050	.063							
SS	82	2.72	.75	-.181	-.102	.602**						
LFS	82	3.13	.54	.081	-.012	.724**	.428**					
FS	82	3.27	.46	.107	-.005	.731**	.216	.496**				
MP	82	3.10	.34	.087	.194	.679**	.139	.253**	.349**			
WL	82	3.17	.44	.128	.201	.510**	-.089	.108	.210**	.666**		
IP	82	3.24	.49	.198	.128	.535**	.231*	.548**	.422**	.250*	.167*	1.00

Note: **Correlation is significant at the 0.01 level (2 tailed) *Correlation is significant at the 0.05 level (2 tailed). IP= Intelligent Planning; WL=Willingness to learn; MP=Multiple personal identities; FS=Family support; LFS=Loyalty to family and school; SS=Spiritual strength; RA=Resiliency average; RP=Resiliency Reading PSAE; RM=Resiliency Math PSAE

Table 5

Correlation of Resiliency for Academic Success Variables for Black Students (n = 31)

Resiliency Characteristics	*N*	*M*	*SD*	(RM) Math	(RP) Reading	RA	SS	LFS	FS	MP	WL	IP
Math PSAE	31	158.63	11.7									
Reading PSAE	31	157.27	13.3	.652**								
RA	31	3.13	.34	.040	.007							
SS	31	3.03	.62	-.164	-.018	.761**						
LFS	31	3.29	.39	-.278	-.236	.682**	.344					
FS	31	3.31	.49	.056	.051	.824**	.671**	.452*				
MP	31	2.74	1.4	.290	.127	.687**	.303	.331	.337			
WL	31	3.02	1.1	.129	-.150	.129	.110	.562**	.170	.562**		
IP	31	3.40	.46	.345*	.504*	.491**	.411*	.199	.599**	.270	-.126	1.00

Note: **Correlation is significant at the 0.01 level (2 tailed) *Correlation is significant at the 0.05 level (2 tailed). IP= Intelligent Planning; WL=Willingness to learn; MP=Multiple personal identities; FS=Family support; LFS=Loyalty to family and school; SS=Spiritual strength; RA=Resiliency average; RP=Resiliency Reading PSAE; RM=Resiliency Math PSAE

Prior to conducting one-way Analysis of Variance (ANOVA), statistical assumptions were checked. The requirements of random sampling and mutual exclusivity of independent samples were met. Students in the sample were drawn from a distributed population from the five urban high schools in the study. As shown in Table 6, the second null hypothesis was rejected as there were differences in PSAE reading scores [$F(4, 271) = 3.80$, $p = .005$] but failed to be rejected for Math PSAE ($p > .05$). There was a significant difference among racial groups in Reading PSAE, but not in Math PSAE.

Table 6

Means, Standard Deviations and One-Way Analyses of Variance in Academic Achievement for Racial Groups

Racial Groups	*White*		*Multi-racial*		*Hispanic*		*Black*				
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	η^2
Reading PSAE	164.33	14.5	162.58	13.9	157.68	13.5	157.27	13.3	3.80	0.005	0.053
Math PSAE	162.38	14.8	160.42	14.3	156.66	14.4	158.63	11.7	1.80	0.129	0.025

***$p < .05$

The null hypothesis for five Resiliency for Academic Success indicators were rejected: Intelligent Planning [$F(4, 345) = 2.94$, $p = .02$], Willingness to Learn a New Language and Culture [$F(4, 345) = 7.63$, $p = .00$], Ability to Use Multiple Personal Identities [$F(4, 345) = 10.73$, $p = .000$], Spiritual Strength [$F(4, 345) = 3.79$, $p = .01$], and Overall Resiliency [$F(4, 345) = 4.1$, $p = .00$]. However, the null hypothesis was failed to be rejected for two Resiliency for Academic Success indicators: Ability to Use Family Support During Crises [$F(4, 345) = 0.71$, $p = .59$] and Loyalty to Family/School [$F(4, 345) = 1.21$, $p = .32$].

Table 7

Means, Standard Deviations and One-Way Analyses of Variance in resiliency characteristics for Racial Groups and Academic Achievement

Racial Groups	*White*		*Multi-racial*		*Hispanic*		*Black*				
Resiliency Characteristics	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	η^2
Intelligent Planning	3.39	.43	3.31	.48	3.24	.49	3.4	.46	2.94	.02	.03
Willingness to Learn a New Language and Culture	2.89	.57	2.98	.49	3.17	.44	3.02	1.1	7.63	.00	.08
Ability to Use Multiple Personal Identities	2.77	.55	2.88	.47	3.10	.46	2.74	1.4	10.73	.00	.10
Ability to Use Family Support During Crises	3.32	.44	3.24	.47	3.27	.46	3.31	.49	0.71	.59	.01
Loyalty to Family/School	3.18	.55	3.21	.49	3.13	.54	3.29	.39	1.21	.32	.01
Spiritual Strength	2.51	.79	2.68	.79	2.72	.75	3.03	.62	3.79	.01	.04
Overall Resiliency	3.05	.30	3.02	.38	3.10	.34	3.13	.34	4.10	.00	.06

***$p < .05$

Discussion

Resiliency for Academic Success indicators had limited impact on academic achievement among student racial groups. Based on the results from the data, there were three major findings in this research. First, White (n = 136) students in this study had significant differences in PSAE reading scores, and the Resiliency for Academic Success indicators of Ability to Use Multiple Personal Identities, and Willingness to Learn a New Language and Culture compared to Hispanic (n = 82) students. Second, White students (n = 136) had significant differences in Spiritual Strength compared to Black students (n = 31). A post hoc Tukey alpha analysis was used to determine if results were significantly

different. Post hoc Tukey is important because it may help find the mean differences among various groups (Allen, 2007).The third and final finding of this study is that multiracial (n = 85) students were not significantly different in academic achievement and resilience characteristics when compared to other student racial groups. It is essential to state there were differences that were excluded from this study based on the sample size of other student racial groups. Respondents identified as Native-Americans *(n = 17)* and Chinese Americans *(n = 23)* had too small a sample size to provide valid results because a sample size of 30 is sufficient or a standard rule in research (Pinelis, Carter & Wojton, 2018).

White (n = 136) students in this study had significant differences in PSAE reading scores, the Ability to Use Multiple Personal Identities, and Willingness to Learn a New Language and Culture when compared to Hispanic (n = 82) students. Trueba (2002) found Hispanic students may adapt and assimilate into a dominant white school culture by forming a new self-identity. This new identity provides them with the aptitude to achieve academically with the support of their family. The differences in the mean scores between White and Hispanic students are rational because White students had the highest mean scores in PSAE reading among all student racial groups, and the most significant difference was with Hispanic students. The reading achievement gap between White and Hispanic students begins in elementary school. As early as fourth grade, White fourth grade students score 19 points higher than Hispanics at the same grade level (de Brey et al., 2019).

The second important finding of the study was the difference between White and Black students with the resilience characteristic of Spiritual Strength. Scholars have

found that 87 percent of African Americans belong to a religious group, and 53 percent attend church at least once a week and pray once or more a day (Sahgal & Smith, 2009). According to this research, religion and spirituality are likely to play a role in the life of African Americans.

The third relevant finding of the research discovered that multiracial students were not significantly different from other student racial groups. This study did not investigate the hardships urban high school students endure, specifically Blacks, Hispanics, and multiracial children. The literature in this study provided research examining the adversity multiracial students may experience in a school setting (Howard, 2018). The investigator made an assumption based on personal, professional, and existing research that multiracial students experience unique challenges in school because of racial ambiguity (Howard, 2018). Also, it was assumed that multiracial students would overcome this adversity by applying Resiliency for Academic Success indicators in their daily school experiences. In this research, students identified their specific racial groups. Specifically, students self-identified their race, as well as the racial group of their parents and grandparents. The research revealed the majority, 74 out of 85, or 67 percent of multiracial students in this study had one parent who identified as White. Also, multiracial students were the only student group to have weak positive correlations between "loyalty to school and family and the wisdom to pursue academic excellence with the love and support of teachers and parents" and PSAE reading and math scores (Trueba, 2002 p. 3). Based on the academic performance data of multiracial students (n = 85) in this study, it appears these students may not experience some of the challenges highlighted in the literature. These include racism, bigotry, or racial identity questions.

Furthermore, if multiracial students (n = 85) have experienced these adverse hardships or experiences, they may have formed a "psychological resilience," which supports them in overcoming any negative experiences in school (Binning, Unzueta, Huo, & Molina, 2009, p. 44).

It is possible to infer that multiracial students in this sample may possess “cultural capital” similar to White students (Trueba, 2004, p. 87). Research by Wallace (2004) provided a real insight into multiracial families and the school experiences of students identifying with two or more racial groups. Wallace (2004) suggests that multiracial students may come from stable and “comfortable” families that provide their children with activities and opportunities more consistent with the “dominant culture” (p. 66). Wallace’s (2004) research demonstrates multiracial students may experience favorable school and life outcomes when they are from a family with resources and social capital. Families and communities having resources for their children may foster increased levels of social capital for students (Firestone & Riehl, 2005). Herman's (2004) study states multiracial students may have "differential opportunities" or more advantages when compared to single-race students of color. Multiracial students may gain acceptance with peers belonging to two different racial groups, which may allow them to socialize with other diverse students (Herman, 2004; Quillian & Redd, 2009). Research by Binning, Unzueta, Huo, and Ludwin (2009) found when multiracial students identify with both racial groups, they are typically more positive, social, and emotionally adjusted.

Implications.

This study provides insight that Resiliency for Academic Success may support students from all racial backgrounds, but does not guarantee any transference to academic

achievement. This study did not measure specific challenges urban high school students (*N = 377*) endure daily, as well as what external indicators challenge their well-being and school experiences. However, research demonstrates that 46% of children experience at least one negative or adverse experience (Sacks, Murphey, & Moore, 2014). These Adverse Childhood Experiences are outlined below:

1. Reside with a divorced or separated parent
2. Experienced a parent or guardian death
3. Reside with parent or guardian that went to jail or prison
4. Reside with an adult that is mentally ill or depressed
5. Reside with a person with an alcohol or drug addiction
6. Observed adult to adult violence (hitting, punching, slapping, biting)
7. Experienced some sort of financial hardship, which resulted in a loss of food or shelter (Sacks, Murphey & Moore, 2014).

Educational leaders and legislators continue to pursue solutions to the challenges students encounter that may impact their academic achievement. The achievement gap remains a consistent theme in our nation's schools, and the research suggests resiliency characteristics may benefit all students regardless of race or ethnicity. Resiliency characteristics may not directly close the achievement gap among high school students, but teaching students how to overcome risk indicators such as "poverty, limited access to supportive services," and/or abusive relationships will improve life outcomes (Fenzel & Richardson, 2019, p. 5). Urban school principals may consider collaborating with

teachers to create professional development opportunities focusing on strengthening staff and student relationships. Brooms (2019) found in his study that teacher-student links are critical to academic success. Furthermore, Brooms (2019) states that a positive relationship increases students' perceptions of their "academic ability and trajectory" of academic performance. Principals that create a collaborative culture and provide opportunities for staff and students to communicate and build trust may not only foster resiliency but change the trajectory of a student's life (Leithwood, 2005; Trueba, 2002).

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Appendix

All survey questions are based on Trueba's (2002) Emic Model of Resiliency for the Transformation of the Self Framework.

Resiliency Survey for Academic Success Directions: For each of the statements below, please circle one answer to show whether you: **Strongly Agree (S/A), Agree (A), Disagree (D) or Strongly Disagree (SD)** ***** Student School I.D. Code** _____	SA	A	D	SD
1. I am a high achieving student				
2. I am committed to learning about a culture different than my own				
3. I am able to understand and relate to other people				
4. When depressed I am able to get help from someone in my family				
5. I am loyal to my school				
6. I trust that a higher power has a plan for my life				
7. I desire to be successful in school				
8. I am able to effectively communicate verbally with people from a different culture				
9. I am able to interact with people from a culture different than my own				
10. I consider myself mentally strong				
11. My family regularly attends religious ceremonies together				
12. I am able to make rational decisions and plan for my future				
13. I am able to speak a language other than my own				

14. I have participated in other cultural group(s) in a social setting or classroom				
15.I have a supportive network of friends				
16. My teachers care about me and want me to succeed in school				
17. My family spiritual beliefs enhance my loyalty to friends, school, and teachers				
18. I am motivated to accomplish major and long term life goals				
19. I have friends from a different culture that speak a different language				
20. I interact with others by speaking a language other than my native (own) language				
21. My family and friends support me in a crisis				
22. My parents want me to succeed in school and care about me				
23. My spiritual beliefs help me make the right decisions				
24. I am willing to wait for things that I want				
25. . My peers believe that I have effective communication skills				
26. My family practices cultural traditions in our home as well as speak our native language				
27. My family has honest conversations about our lives				
28. I am a dedicated and excellent student				
29. I help my family members when they are in a crisis				

Part II. Student/Family Information Background

30. Was your father born in the U.S.?	Yes	No			
31. Was your mother born in the U.S.?	Yes	No			
32. Describe your father's racial background. (You may circle more than one race).	White	Black	Asian/ Pacific Islander	Hispanic	Native-American
33. Describe your mother's racial background. (You may circle more than one race).	White	Black	Asian/ Pacific Islander	Hispanic	Native-American
34. Describe your grandfather's racial background. (You may circle more than one race).	White	Black	Asian/ Pacific Islander	Hispanic	Native-American
35. Describe your grandmother's racial background. (You may circle more than one race).	White	Black	Asian/ Pacific Islander	Hispanic	Native-American
36. Describe your racial background (You may circle more than one).	**White**	**Black**	**Asian/ Pacific Islander**	**Hispanic**	**Native-American**