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Problem-Solving: The Influence of Sex and Community Efficacy on Self-Efficacy. A Random Effects Analysis.

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Abstract

Essential to decision-making, perceptions of self-efficacy is associated with individual choice. An abundance of studies examine the cognitive construct of self-efficacy and the importance of self-efficacy in problem-solving. However, few studies applied this ideal to neighborhood-based problem-solving. Additionally, these studies failed to examine the relationship between neighborhood efficacy and perceived self-efficacy. Collective efficacy and the perceived efficacy of small groups of neighbors may influence respondents' perception of self-efficacy. Using the Seattle Neighborhood and Crime Survey data, a series of binary logistic regression models were conducted, which were grouped by census tract. These models were used to understand the degree to which hypothesized predictor variables impacted perceptions of self-efficacy. The results reinforced that male respondents report higher levels of self-efficacy. Additionally, this work demonstrated a relationship between neighborhood efficacy, which was analyzed as collective efficacy and small group efficacy, and self-efficacy. Finally, the limitations of this study and suggestions for future research were discussed.

Introduction

In their daily lives, people continuously make decisions about what courses of action to pursue and how long to continue those actions. People's judgments of their capabilities and the capabilities of various institutions influence their thoughts and reactions during anticipated and actual contacts, in a variety of situations (Maddox, 2016; Panadero, Jonsson, & Botella, 2017). Individual's thoughts shape most courses of action (Schwarzer, 2014). Efficacy in dealing with one's situation is not merely a matter of knowing what to do, but also involves self-evaluations of skills, in challenging circumstances (Bandura, 1977; 1993). Self-efficacy judgments, whether accurate or faulty influence choice (Farmer & Tierney, 2017; Panadero et al., 2017). People's beliefs in their efficacy impact the types of preemptive scenarios they construct and rehearse (Maddox, 2016; Ng & Lucianetti, 2016; Schwarzer, 2014). Those who doubt their effectiveness will perceive failure.

Understanding the factors that influence self-efficacy is at the center of creating safe and stable neighborhoods, a productive workforce, and an effective government (Ahn, Usher, Butz, & Bong, 2016; Farmer & Tierney, 2017). Various institutions within society are effective at solving differing problems. However, when individuals determine that these institutions have failed, then it is necessary for individuals to have the capacity to address the issues that they may face (Farmer & Tierney, 2017; Ng & Lucianetti, 2016; Panadero et al., 2017). The effectiveness of these other institutions may impact how individuals perceive themselves. For example, regarding crime prevention problem-solving, instead of engaging the police, individuals are capable of fortifying their property, by installing alarms to protect their homes and locking their car doors when leaving their vehicles unattended (Lavarkas, 1982; Rollwagen, 2016). Additionally, resource allocation may be predicated on the capacity of neighborhoods, nonprofit organizations, and individual citizens. Thus, it is essential for the public sector to understand the capabilities of individuals.

Purpose of the Study

Several positions were formulated to guide the present research. Our first hypothesis posits that having social integration will have a statistically significant relationship with perceptions of high levels of self-efficacy, regarding community-based problem-solving. Thus, it is hypothesized that having familial or friendship ties and engaging in individual interactive behavior will positively impact perceptions of self-efficacy. Our second hypothesis predicts that neighborhood conditions will have a statistically significant relationship with perceptions of self-efficacy. It is hypothesized that increases in collective efficacy and perceptions about the overall safety of the neighborhood will positively impact perceptions of self-efficacy.

Conversely, it is hypothesized that increases in neighborhood disorder will negatively impact the perceptions of self-efficacy. Finally, it is hypothesized that the perception of efficacy for other institutions of community-based problem-solving will have a statistically significant relationship with perceptions of self-efficacy. The null hypothesis for this study is: controlling for the other variables of analysis, the predictor variables have no statistically significant effect on the perceptions of self-efficacy, regarding community-based problem-solving.

METHODOLOGY

This research was situated within the literature on individual interactions, race, and perceptions of a person's surroundings. This research built a model for self-efficacy based on individual-level constructs of previously researched neighborhood-level factors, as well as, respondent's perception of other approaches to solving neighborhood problems. To study self-efficacy, secondary data from the simple random sample portion of the Seattle Neighborhoods and Crime Survey (SNCS) was analyzed. This data was made available by the Interuniversity Consortium for Political and Social Research (Matsueda, 2010). The SNCS collected telephonic data from adults surveyed from 2002-2003. This collection was conducted by the Social and Behavioral Research Institute (SBRI) at California State University- San Marcos. The 'random sample' portion collected data using the cluster sampling method and used a modified version of the 15-attempt protocol designed by the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System Survey (Matsueda 2010; 2015). The cluster samples were drawn. Two block groups were randomly selected from each of the 123 census tracts in Seattle; then nine households were randomly selected from each block group (Drakulich & Rose, 2013; Matsueda & Drakulich, 2015). The response rate was over 51%, resulting in a sample of 2220 households (Matsueda & Drakulich, 2015).

Seattle, Washington is located in the Northwestern portion of the United States and, in 2000, was ranked 24th in size, with a population of approximately 560,000 (U.S. Census Bureau, 2003). White, Black, and Asian were the three most identified racial groups, in the Census and of this population, 70.09% identified as White; thus, White is the predominant racial group. Also, 8.44% identified as Black, and 13.12% identified as Asian. Moreover, 8.34% of respondents identified as any of the other response categories for race. Also, 94.73% of respondents identified as not of Hispanic or Latino origin. Additionally, 50.05% identified as female and 54% of Seattle residents were homeowners.

** place table 1 about here**

Outcome Variable: Perceived self-efficacy is measured by the specific question: "How effective would the following approach be in resolving major problems around your neighborhood: dealing with things yourself?" Responses were based on a rating scale ranging from 'Not at All' to 'Highly Effective' and reverse coded where "Highly Effective" equals two, "Somewhat Effective" equals one, and "Not at All" equals zero. The self-efficacy variable has a mean of .95 and a standard deviation of .62.

For this analysis, the predictor variables consisted of having familial ties, having friendship ties, having engaged in individual interactions, neighborhood disorder, collective efficacy, and perceiving efficacy for other problem-solving approaches. Familial relationships were measured by asking respondents the following question: "Not counting those who live with you, how many of your relatives or in-laws live in your neighborhood, that is, the three-block area on each side of your home?" Friendship ties were measured by asking respondents the following question: "Not counting those who live with you, and excluding family, how many close friends do you have in your neighborhood?" Each question had

response categories that were: “1 - A Lot;” “2 - A Few;” “3 - None.” Both of these measures were recorded binary, by combining the “A Lot” and “A Few” response options and coding them as one and by recording response option “None” as zero. For the “familial ties” variable, the mean is .085, with a standard deviation of .279; the “friendship ties” variable has a mean of .662 and a standard deviation of .473 (Table 1).

Individual interaction ($\bar{x} = 6.03$) was measured as a series of items asking the respondent, “How often have you partaken in an action with a neighbor?” The response scale ranged from “0 = Never” to “2 = Often.” The specific items in this measure included: watched a neighbor’s home, borrowed tools or small food items, had dinner or lunch with a neighbor, helped a neighbor with a problem, asked about personal things, said hello or talked and participated in any other organized block activity (Cronbach’s Alpha; $\alpha = 0.80$).

Neighborhood conditions. In this study, neighborhood disorder is constructed by measuring both observed and perceived disorder. This measure consists of nine questions. The perceived disorder questions were: “how much of a problem would you say the following is: i) groups of teenagers hanging around the street, ii) litter/garbage/trash on the streets, iii) spray-painted graffiti on buildings and streets, iv) abandoned houses and v) rundown buildings, and neighbors who cause trouble or make noise?” The perceived disorder responses categories are: 2=big problem, 1=small problem, and 0=not a problem (Cronbach’s Alpha; $\alpha = 0.75$). The observed disorder question was “have you personally observed the following in your neighborhood: i) children fighting in the street, ii) children spray-painting graffiti on a local building, iii) children disrespecting adults, and iv) children skipping school and hanging out on a street corner?” The observed disorder responses categories are ‘Yes’ equaling one (Cronbach’s Alpha; $\alpha = 0.59$). These constructs are combined to create a disorder measure, whose Cronbach’s Alpha is .78 ($\bar{x} = 2.69$).

Similarly, the perception of social control and perception of social cohesion is combined to create a collective efficacy measure (Cronbach’s Alpha; $\alpha = 0.84$). Perception of social control is measured as a series of Likert scale items asking the respondent, “how likely is it that your neighbor will do something about children’s actions.” Each response scale ranges from 1 = “Very Unlikely” to 4 = “Very Likely.” The specific items in this measure include: skipping school, spray painting graffiti, disrespecting adults, and fighting in the neighborhood (Cronbach’s Alpha; $\alpha = 0.77$). Additionally, the perception of social cohesion variable is measured by asking a series of four questions to assess if the respondent agrees that: (1) “You can count on adults in this neighborhood to watch out that children are safe and don’t get into trouble; (2) People in this neighborhood can be trusted; (3) Adults in this neighborhood know who the local children area; and (4) People around here are willing to help their neighbors.” Responses for this measure were based on a Likert-type scale (Cronbach’s Alpha; $\alpha = 0.81$). The response categories were reverse coded and ranged from 1 (strongly disagree) to 4 (strongly agree). The two internal categories correspond with the following: disagree=2 and agree=3 ($\bar{x} = 24.19$).

Problem-solving efficacy. Other approaches have an impact on problem-solving within neighborhoods; this study includes measures to examine the perceived efficacy of these approaches. These approaches were measured by the specific question: “How effective would the following approach be in resolving major problems around your neighborhood?” The approaches were organized neighborhood associations or community clubs, contacting the police, contacting officials of local, state or national government, and a small group of neighbors. Responses were based on a rating scale ranging from ‘Not at All’ to ‘Highly Effective’ and reverse coded where “Highly Effective” equals two, “Somewhat Effective” equals one, and “Not at All” equals zero.

The efficacy of resolving a major problem by organized neighborhood associations or community club’s (ONACC) variable has a mean of 1.199 and a standard deviation of .629. Likewise, the efficacy of resolving a significant problem by contacting the police variable has a mean of 1.347 and a standard deviation of 0.596. Moreover, the efficacy of resolving a major problem by contacting officials of local, state or national government variable has a mean of 0.831 and a standard deviation of 0.643. Finally, the efficacy of resolving a major problem by small groups of neighbors’ variable has a mean of 1.464 and a standard deviation of 0.598.

Control Variables. Several social demographic control variables were included in the analysis. Males are coded as the value of one ($\bar{x} = .51$). Age in years is an integer variable ($\bar{x} = 47.02$). Residence length is operationalized as the number of years the respondents reported living at their current addresses ($\bar{x} = 10.53$). Respondents' marital status is included as a recorded binary measure, where 'Never Married' equals zero ($\bar{x} = 0.74$). Respondents' race/ethnicity variables were a series of binary measures indicating whether respondents identified as: Black ($\bar{x} = .04$), Asian ($\bar{x} = .06$), Latino ($\bar{x} = .04$). Respondents identifying as white were the reference group. Home ownership ($\bar{x} = .66$) is included as a binary measure, where respondents were asked "do you own your current dwelling?" in which No=0, Yes=1. Finally, in the original data, respondents' income was codified based on brackets of under \$25,000 (1), \$25,001 to \$75,000 (2), and \$75,001 (3). Typically, income is examined as a continuous measure. To address this issue, respondents' income variables were included as binary measures, where income ranging from \$25,000 - \$75,000, was coded as one with all other categories coded as zero. Likewise, income that was greater than \$75,000 was coded as one, in a separate dummy variable, where all other income was coded as zero. Respondents' income less than \$25,000 was used as the income reference group.

Analytical Strategy

Listwise deletion was used to address missing data. Ordinal regression models were used for statistical estimation. The respondents were grouped by census tract, which is numbered 1 to 123 in Seattle. However, the survey tract identification numbers are unmatchable; thus U.S. Census data could not be used (Matsueda & Drakulich, 2015). This study controls for the census tract, to address the concern about location identification (Drakulich & Rose, 2013; McNeely & Yuan, 2017; Yuan & McNeely, 2017). Stata 14.2 is used to conduct the analysis (StataCorp, 2014). Random effects (RE) modeling is used to assist in controlling for unobserved homogeneity (Alison, 2005; Alison & Christakis, 2006). The RE assumes that the individual specific effects are uncorrelated with the independent variables, which allows the slope of each parameter to vary by tract and allows for the true effect size to differ (Liu, 2015).

The analyses proceeded in three stages. First, Chi-squared tests (not presented here) were run to analyze the relationship between the categorical predictor variables. While some showed statistically significant relationships, Cramer's V indicated a weak association among these relationships. Second, an unconditional model was estimated to examine the distribution of perceived self-efficacy across census tracts. Significant variation in perceived self-efficacy would provide evidence for multilevel testing. The unconditional model had a ratio of variance in the intercept of .016 and a standard error of .043, which is less than two when the intercept and standard error are divided. A result of two or greater would indicate that the between tract variance is significant (Hox, Moerbeek, & Van de Schoot, 2017; Liu, 2015). Finally, based on the previous analysis, a series of ordinal regression models were analyzed to examine the relationship between the predictor variables and self-efficacy.

RESULTS

From Table 2, the random effects of conditional logistic regression models have 1560 respondents. The base model analyzing a respondent's perception of self-efficacy is not significant at the less than .05 level ($p < 0.18$). Regarding the full model ($p < 0.001$), we reject the null hypothesis for some predictor variables. The null hypothesis was associated with various research questions.

First, does social integration impact perceptions of self-efficacy? We failed to reject the null hypothesis that familial or friendship ties are not statistically significant regarding perception self-efficacy. Also, do increased interactions influence the perceived self-efficacy? We fail to reject the null hypothesis that increased interactions are not statistically significant regarding self-efficacy.

Next, do neighborhood conditions influence an individual's perception of self-efficacy? We failed to reject the null hypothesis that neighborhood disorder is not statistically significant, regarding perceptions of self-efficacy. However, we reject the null hypothesis that increases in collective efficacy are not statistically significant influencer for perceived self-efficacy. Increases in collective efficacy are positively associated with perceived high self-efficacy, compared to other response categories, and collective efficacy increased the odds of respondents perceived a high level of self-efficacy by roughly 10% (odds ratio = 1.100; $p < .001$). This result has a 95% confidence interval of 1.064 to 1.136.

Furthermore, do perceptions of efficacy for other institutions of community-based problem-solving will have a statistically significant relationship with perceptions of self-efficacy? We failed to reject the null hypothesis that high levels of efficacy for organized neighborhood associations and community clubs, the police, and the government are not statistically significant regarding perceptions of high self-efficacy for community-based problem-solving. However, we reject the null hypothesis that perceived efficacy for small groups of neighbors is not a statistically significant influencer, concerning perceived self-efficacy. Perceiving high efficacy for a small group of neighbors is positively associated with perceived high levels of self-efficacy, compared to other response categories. Perceived small group efficacy increased the odds of perceiving high levels of self-efficacy by roughly 70% (odds ratio = 1.701; $p < .001$). This result has a 95% confidence interval of 1.374 to 2.106.

Finally, a demographic control variable has a significantly positive relationship with perceptions of self-efficacy. Being male increased the odds of perceiving high self-efficacy, compared to the other response categories, by roughly 47%. The 95% confidence interval for this result was 1.211 to 1.793 (odds ratio = 1.473; $p < .001$).

** place table 2 about here**

Discussion

In this study, we investigated to what extent respondents' self-efficacy for solving major problems in their neighborhood, is predicted by their characteristics, social integration, neighborhood characteristics, and their perception of efficacy for other problem-solving institutions. This work proposed and examined several research hypotheses. The research questions, associated with these hypotheses, sought to analyze the relationship between various social components, concerns about neighborhood conditions, and perceptions of efficacy for other neighborhood-based problem-solving approaches, concerning perceived self-efficacy. This study contributes to research into self-efficacy in the following ways: first, regarding neighborhood-based problem-solving, this is the first examination of self-efficacy, as a perceived approach to solving major problems in the neighborhood. Second, we take into account the influence of other institutions, who assist in problem-solving within communities. Findings have emerged, from the proceeding analysis.

First, the results suggest that neighborhood efficacy, in the form of perceived collective and small group efficacy has a positive impact on perceiving high self-efficacy for solving significant problems. This finding advances the academic inquiry into the impact that perceptions of collective efficacy have on other social phenomena, in Seattle (Matsueda & Drakulich, 2015; Yuan & McNeeley, 2017). If this is true, then local government officials, policing management, and neighborhood associates should work to create directives and organizations that will help the citizens of a given area foster more unity between the members of a community. Creating more opportunities for residents to have positive interactions may be one avenue for facilitating cohesion and perceived social control (Lavrakas, 1982).

Second, the increase in individual interaction and, ultimately, perceived efficacy between the residents may allow for an avenue of access with which various officials can engage citizens and build working coalitions to address multiple social issues. The impact of perceived neighborhood efficacy may also influence the neighborhood's ability to acquire and mobilize the resources necessary to address problems. Better working cohesion amongst neighbors may help neighborhoods to address minor problems while allowing the neighborhood to better engage the police and government officials when necessary in addressing significant problems.

Limitations and future directions

Limitations to the present study should be noted. First, this study used secondary data to test these hypotheses, and the data is correlational, which means that it cannot make causal interpretations. It is important to emphasize that these analyses only examined the relationships between the operationalized variables at the level of individual perceptions. The focus of the primary data collection was not to analyze individual-level constructs into how people interact and the effects these interactions have on social components. Due to the nature of the study, which was a clustered random sample of Seattle, it is not possible to aggregate disorder, collective efficacy, length of residence, and homeownership to any specific neighborhood. This lack of consistent census tract identification inhibits the study's ability to

describe the results to any particular census tract, thus allowing for comparative or longitudinal analyses (see Miethe 1992).

Second, the measures used to analyze self-efficacy does not examine these perceptions based on actual or hypothetical scenarios. Depending on the situation, individuals may have varying responses about self-efficacy at solving the purposed or real problem. Future testing should offer respondents' a variety of vignettes encompassing property and violent crime, juvenile delinquency, personal concerns, such as school vouchers for children, employment, conflict resolution with neighbors, etc..., and neighborhood-specific concerns, such as speeding, loitering, etc., to determine how respondent's assessments will differ.

Thirdly, to advance the study into these and other social components, future testing should examine the influence of these types of variables on perceived self-efficacy for each racial and economic group. Since a small group of neighbors' efficacy impacted self-efficacy, future testing should examine the moderating effects that neighborhood racial composition and economic homogeneity may have on perceptions of the small group efficacy, and, ultimately on self-efficacy. By this, the analysis should include perceived composition, as well as, census numbers for each neighborhood, to examine the relationship of homogeneity or neighborhood diversity and perceptions of the small group efficacy. This research would determine if a respondent is more likely to perceive and engage neighbors differently when they reside with individuals who are of their same or different racial groups.

Additionally, a further examination of the impact that various social components have on concerns about the efficacy of each of these problem-solving approaches is warranted. This future research should address the relationship between residential location and perceptions of the effectiveness of various problem-solving approaches. To address this, research into different residential areas, such as apartment complexes vs. primarily homeowner areas, should aid in the understanding about the perceptions of which approaches are perceived as highly effective. Finally, research into a respondent's living proximity to dual zoned (residential and commercial) property areas, and the impact this location has on these perceptions warrants investigation as well.

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Table 1
Self-Efficacy Descriptive Statistics Total N = 1560

Variable(s)	N	mean	sd	min	max
Residence		10.53	10.97	0	62
Collective Efficacy	24,194	4.172	11	32	
Age		47.02	15.027	18	91
Neighborhood Disorder		2.685	2.732	0	14
Individual Interaction		6.031	2.771	0	12
Black		0.044	0.206	0	1
No	1,491				
Yes	69				
Asian		0.058	0.234	0	1
No	1,469				
Yes	91				
Hispanic/Latino		0.044	0.204	0	1
No	1,492				
Yes	68				
Educational Attainment		2.946	0.954	1	4
High School	153				
Some College	294				
College Graduate	597				
Graduate/Professional School Graduate	516				
Marital Status		0.739	0.439	0	1
Never Married	407				
Married	1,153				
Income					
Middle Category = \$25K - \$75K		0.497	0.5	0	1
No	785				
Yes	775				
Higher Category = > \$75K		0.373	0.484	1	3
No	978				
Yes	582				
HomeOwner		0.661	0.474	0	1
No	529				
Yes	1,031				
Familial Ties		0.085	0.279	0	1
No	1,428				
Yes	132				
Friendship Ties		0.662	0.473	0	1
No	528				
Yes	1,032				
Sex		0.506	0.5	0	1
Female	771				
Male	789				
ONACC Efficacy		1.199	0.629	0	2
Not at All Effective	184				
Somewhat Effective	881				
Highly Effective	495				
Police Efficacy		1.347	0.596	0	2
Not at All Effective	100				
Somewhat Effective	818				
Highly Effective	642				
Government Efficacy		0.831	0.643	0	2
Not at All Effective	477				
Somewhat Effective	870				
Highly Effective	213				
Small Group Efficacy		1.464	0.598	0	2
Not at All Effective	85				
Somewhat Effective	666				
Highly Effective	809				
Self-Efficacy		0.953	0.623	0	2
Not at All Effective	341				
Somewhat Effective	952				
Highly Effective	267				

Table 2:
Self-Efficacy Ordinal Logistic Regression Random Effects

Variable(s)	Base			Full		
	OR	SE	95% CI	OR	SE	95% CI
Control						
Home Owner	1.202	0.169	[0.913, 1.582]	0.998	0.134	[0.767, 1.298]
Male	1.339**	0.130	[1.106, 1.620]	1.473***	0.148	[1.211, 1.793]
Age	1.004	0.005	[0.994, 1.014]	0.999	0.005	[0.989, 1.009]
Length of Residence	1.001	0.006	[0.989, 1.013]	0.999	0.006	[0.987, 1.012]
Marital Status	1.025	0.130	[.0798, 1.315]	0.938	0.122	[0.726, 1.211]
Education Attainment	1.066	0.067	[0.943, 1.204]	1.013	0.063	[0.897, 1.144]
Race (White as reference)						
Black	1.068	0.313	[0.601, 1.896]	1.168	0.354	[0.644, 2.117]
Asian	0.774	0.227	[0.436, 1.374]	0.850	0.245	[0.4.84, 1.496]
Hispanic/Latino	0.975	0.280	[0.556, 1.712]	0.945	0.244	[0.570, 1.565]
Income (< \$25K as reference)						
\$25K - \$75K	1.142	0.210	[0.797, 1.639]	0.945	0.180	[0.651, 1.372]
> \$75K	1.183	0.226	[0.814, 1.719]	0.874	0.179	[0.585, 1.306]
Predictor						
Social Integration						
Family				1.098	0.239	[0.717, 1.681]
Friends				0.880	0.104	[0.697, 1.111]
Individual Interaction				1.034	0.026	[0.984, 1.087]
Neighborhood						
Disorder				0.969	0.023	[0.925, 1.016]
Collective Efficacy				1.100***	0.018	[1.064, 1.136]
Problem-Solving Efficacy						
ONACC				1.058	0.121	[0.846, 1.324]
Police				1.085	0.112	[0.887, 1.328]
Government				1.008	0.097	[0.834, 1.217]
Small Groups				1.701***	0.185	[1.374, 2.106]
Cut 1	-0.496	0.344	[-1.169, .178]	1.954	0.531	[0.913, 2.996]
Cut 2	2.389	0.346	[1.711, 3.068]	5.060	0.543	[3.996, 6.124]
Model χ^2		15.22			151.41	
df		11			20	
Log Likelihood		-1449.06			-1379.3	
p		0.173			0.001	
BIC		2993.7			2920.4	
n		1560			1560	

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Note: Grouped by Census Tract

Affirmative Action in Brazilian Higher Education and its Challenge to Hegemonic view of Racial Democracy.

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Abstract

For centuries Brazilian ruling class and academic elites have widespread the myth of Brazil being a “Racial Democracy,” which has been legitimized by Brazilians of all race, ethnicity, and social classes. The legitimating of this myth has been used to cover up centuries of pervasive racial inequality in Brazil. In this essay, I present the reasons why I advocate for the maintenance of the system of quotas in Brazilian higher education implemented in 2000, during the administration of President Fernando Henrique Cardoso. The quotas system aims to guarantee space in the Brazilian public universities for Afro-Brazilians and indigenous (native Brazilians) students. For a nation that prides itself on being a “Racial Democracy” such an event put into question an image that Brazilians of different race and ethnicities have of themselves. The quotas policy created a unique opportunity to reflect in how race has been historically dealt in Brazil where a significant part of its population (Afro-Brazilian) hasn’t had fully access to the country’s social, economic, and political arenas. My objective in this essay is to provide a critical account of race in Brazil by focusing in the legacy of three hundred years of slavery, the construction and maintenance of racist ideas, white supremacy, and the role of the myth of racial democracy.

Introduction

Brazil is well known throughout the world as a country of widespread miscegenation between white Europeans descendants, black African descendants, and indigenous native Brazilians. Supported by the myth of racial democracy, Brazil has gained a worldwide reputation as a country with no racial problems relative to those which exist in other nations. It is said that in Brazil people of three different races live in an atmosphere of complete harmony with each other. On almost every occasion that the subject “race” is discussed, proud Brazilians whites, blacks and people of mixed blood say, “Everybody here is equal. There is racism in the United States, not here.”

Racial Inequality in Brazil

Maria Nazareth Soares Fonseca, professor of African Literature at Catholic University of Minas Gerais points out that in contemporary Brazil, black Brazilians still carry the same kind of image as those during slavery time. Fonseca argues that during slavery in Brazil, blacks were used as commodities in the sugarcane plantations, in the mines, and later on in the factories. Each slave had his or her value calculated for what it represented as an exchange commodity that generated wealth for those in power (Fonseca 2000:89). Fonseca notes that Haitian author Rene Depestre argues that historically Brazil and other Latin American countries developed a crucial interrelation between human beings and their skin color and this phenomenon is so profound that until today in Latin American human bodies are seen through a coding of moral and exterior representation. It is part of these coding the combination of values that disvalue a black person and their social and cultural experiences (Fonseca 2000:90). Fonseca notes that, in Brazil after slavery, the society passed to discriminate blacks for don’t having the skills and preparation to enter the new forms of labor created by the new capitalist system. This was the price blacks had to pay for being freed from three hundred years of slavery and finding themselves outside the new capitalist norm of labor and labor relations (Fonseca 2000:90).

Seen as savage beings with small mental capabilities, black Brazilians entered the era post-slavery to occupy the most unskilled and lowest paid Brazilian jobs. Free from slavery but victims of intense poverty, discrimination, and without any policy of protection or integration into society, the black national identity was created in relation to the low-paid and unskilled positions they occupied. In addition, seen as a degraded part of the Brazilian population, Afro-Brazilians were rejected by social activist movements that made the indigenous (native Brazilian) the symbol of Brazilian identity. The indigenous were seen as the ideal symbol of Brazilian nationality. Those images expose the silence about the black Brazilian situation. Since the abolition of slavery, black Brazilians were subjugated and expected to adjust to the social order in the country without any governmental support. As a result, they became the largest marginalized group especially in the ghetto in the large cities. Brazilian Historian, Lilian K. Mortiz Schwarcz argues that at the turn of the eighteenth century, Brazil was a country without identity. The Brazilian project of national identity, created to show to Europe and North America that Brazil was a free and developing nation, left out blacks and mestizos, that composed the large part of its population. By the end of the eighteenth century, Brazil had a population of about two millions blacks and about one million non-blacks (2000:13).

Furthermore, Schwarcz points out that Brazilian national identity was formulated by hiding the violence suffered by both blacks and native Brazilians and by denying to both full-citizenship. In a national project that began with the declaration of independence from Portugal in 1822, followed by the abolition of slavery in 1888 and the Brazilian Revolution in 1930, the racial question has always been camouflaged by mechanisms that tried to deny and hide the discrimination of those considered different from the expected societal norm. Schwarcz observes that in regard to how the Brazilian society dealt with slavery, the images of black and blackness continued to be reproduced by a combination of discriminations and prejudices that still define the treatment of blacks Brazilians in different arenas of Brazilian society (2000:14).

Florestan Fernandes a Brazilian sociologist who taught for several years at the University of Toronto, Canada claims that the mechanization of racial adjustment that took place in Brazil since slavery, shows that there wasn't in Brazil any form of openly conscious and organized resistance to foster discussion between whites, blacks, and mixed blood people as was the core in the United States with the Civil Rights Movement and laws that tried to integrate the newly freed ex-slaves into American society (2000:93). For Fernandes, the end of slavery did not represent a major change in the Brazilian power relation because power continued to be held by the white dominant elite. The small change that took place was mostly defined in personal terms when the former slave-owner decided to lease land to ex-slaves or in some cases to keep having the newly freed ex-slaves work on their land by giving them food and shelter in exchange for their labor (Fernandes 2000:93). Fernandes explains that those conditions fostered the myth of racial democracy because rather than having laws of protection and integration for ex-slaves into Brazilian economic and social life, integration was characterized by the "good will" of former slave owners in providing the means of existence for former slaves. Therefore, for centuries to come the slavery structure continued to define racial relations in Brazil giving a foundation to white supremacy and black subordination (Fernandes 2000:94).

Fernandes notes that since the beginning of the twentieth-century, the color of poverty in Brazil is largely black and mestizo where there is a significant correlation between black skin and low-paid, unskilled jobs. Being black in Brazil is automatically associated to occupation of low-paid jobs that in large keep blacks from truly integrating into Brazilian society in a more significant manner (Fonseca 2000:98). As Evelyn Nakano Glenn, professor Ethnic Studies UC Berkeley notes, "Simultaneously, citizenship and labor have been arenas in which groups have contested their exclusion, oppression, and exploitation" (Glenn 2002: 2). In Brazil black skin continues to be a symbol of inferiority in a society where being black means depersonalization. As a result, individuals of black skin can be victims of brutal violence without it being seen as a shock to society. As Caetano Veloso and Gilberto Gil, two renowned Brazilian singers and songwriters writes in lyric of song Haiti:

"When you were invited to go up the plaza of Jorge Amado Foundation, to see from the above the line of police officers almost all blacks beating up blacks crook and mulatto thieves, and the others who are

almost-white but treated as blacks. Only to show to the others who are almost all blacks, how blacks, poor, and mulattos, and these almost-white-almost-black because too poor, are treated. It do not even matter if for one moment, the eyes of the whole world are turned to that site where the slaves was brutalized...nobody, nobody are citizens.”

Fernandes explains that violence against the black body was an everyday routine during slavery and this phenomenon continues to be seen as normal since it is practiced against those who carry in themselves the color that symbolize dehumanization and exclusion from having full-citizenship in Brazilian society. On December 14, 1890, the then president of the Brazilian National Tribunal of Treasury, Ruy Barbosa, ordered all documentation that showed signs of the existence of slavery in Brazil to be burned (2000:95). Fernandes argues that in opposition to what is portrayed in the Brazilian history books that try to convey the image of Brazil as a pacific and cordial slave society, the use of violence as a form of control and intimidation shows how the slaves were treated as savage animals that necessitated the use of rigid force to control. As a result, it was common to use instruments to leave scars on the body, and brutal violence to intimidate others from trying to rebel against the system Fernandes, 2000:95).

Inequality after Slavery

Elisa Larkin Nascimento psychologist, University of São Paulo points out that Brazil was the last country in the Western hemisphere to formally abolish slavery when it ended in May 13, 1888. Even though the country had an enormous population of Afro-descendants after slavery no measure was taken to incorporate the new class of former slaves into the country’s social and economic life. Large numbers of ex-slaves stayed on the same plantations in a semi-slavery condition or moved to the large urban hills areas, which became today’s shantytowns (favelas). These shantytowns became predominantly populated by ex-slaves excluded from the country’s labor market (2007: 54). Economist Helio Santos argues that the way in which slavery ended in Brazil, with slaves being free without owning anything and without having any social, economic, or political support from the country’s ruling elite explains the original foundation for blacks’ historical poverty and exclusion in Brazilian society (2007:54). Santos notes that abolitionists such as Jose Bonifacio and Joaquim Nabuco tried to draw government attention to the need to provide social support and create measures to help former slaves to integrate into Brazilian society. But their plea was disregarded since the Brazilian government was heavily composed of former slave owners. In opposition to Bonifacio and Nabuco’s views, the governing elite in Brazil at the time consciously put into a plan a strategy to exterminate the black population by leaving them to starve, without homes and employment (2007:55).

In contemporary Brazil, racial inequality is mixed with ethnic racial denial. Different from African Americans, large numbers of Afro-Brazilians deny their African heritage. In Brazil, race is something people can change in their lifetime, usually by succeeding economically or marrying a lighter-skinned person. Any black Brazilian who has a little lighter skin is not considered black in the country’s racial stratification. There are more than one hundred ways to classify people of mixed blood. Among the most common are moreno, mulatto, pardon, and coffee with milk. Black ethnicity in Brazilian culture is still something far from being embraced. It is not surprising that people of mixed race enjoy more social mobility than blacks. Economic achievement also determines people’s racial status. Black Brazilians who succeed economically begin to be seen in Brazilian society as not black. There is a common statement in Brazil about Pelé, the black Brazilian well-known worldwide as the king of soccer that says, “Pelé has so much money that he is not black anymore.”

The slavery perception of blackness is still very present in contemporary Brazil, where being black is associated with lack of intellectual capacity, acceptance of low-paying jobs, and inferior treatment. As Chua writes: “As a result, there is not black consciousness or indignation. Nobody sees this neighborhood that was running with blood as black neighborhoods: Nobody saw that blood that was flowing as black blood” (2003: 71). Since the 1960s the accelerated process of industrialization and urbanization has significantly improved living standards for most Brazilians. According to Pable Gentili, director of a social program at the State University of Rio de Janeiro that studies race in education, “While 45 percent of the country’s 170 million people defined themselves as either black or pardo in the 2000 census, only 17 percent of university graduates are of mixed race and only 2 percent are black. In addition, the

majority of blacks and pardos are concentrated in such areas as social work and education, while law, medicine, and engineering departments are virtually all white” ((2003: 73).” Scholars argue Brazilian industrial development in the twentieth century was based in oppressive social class exploitation. Even though Brazil has extensive natural resources as well as industrial achievement, in 1999 Brazil ranked the second most unequal in income distribution and income concentration in the world, behind only Sierra Leone (2003: 73).

Signs of Racism in Different Arenas of Brazilian Society

Sociologist, France Winddance Twine points out that in Brazil many white families adopt or have young black girls living in their households. Frequently, the girls come from poor rural families. They live in those white families as housekeepers (*empregadas*) almost as slaves. In this type of relationship, the white families give food, shelter, and pay a little wage in exchange for the black girls’ labor. In many cases these young girls become adults without ever getting an education, getting married, or constructing a life for themselves. Sometimes they dedicate their entire life to taking care of a white family, at times raising a second or third generation of that family (1998: 51).

The Middle-Class Social Clubs

Scholars refer to middle class social clubs as one of the remaining factors that illustrate obstacles to Afro-Brazilians’ upward mobility. For white middle and upper-class Brazilians, the social clubs are one of the crucial factors of class stratification available. The social clubs are strong signs of social status, they function as a strong and effective means of exclusion. Some Afro-Brazilian professionals have experienced enormous resistance when trying to integrate into some social clubs. The resistance is not based on their socio-economic status, but on the color of their skin (1998: 53).

The Semiotic Contours of Racism: Representations of Afro-Brazilians

Twine a light-skinned black American, tells how surprised she felt when doing her research in a town called Vasalia, Rio de Janeiro. Twine established friendship with Carla and Catarina, two Afro-Brazilian elementary school teachers who asked her to help them to prepare for their first week of class. According to Twine:

“I watched in astonishment as Carla and Catarina, brown-skinned and brown-eyed women, repeatedly drew images of exclusively blond, blue-eyed children to illustrate all of their grading books. This continued into the night as they produced exclusively white images for their classroom wall posters” (1998: 54).

In addition, during a visit to Carla and Catarina’s school, Twine made a comment about the absence of visual images that portrayed people of color. When trying to engage the teachers into a reflection of their complete absence of images that resembled the majority of students of their classroom, Twine was labeled as being an anti-white racist. The political scientist Michael Hanchard articulated that from the beginning of their education, black Brazilians are overwhelmingly confronted with images of themselves that only portray negativity. Those images portray Afro-Brazilians as being sexually promiscuous and aggressive, intellectually inferior to whites, and lacking positions of power (1998:55).

The Development of Racist Ideas in Brazil

Thomas E. Skidmore argues that Brazil, like other Latin American countries was very vulnerable to the theories of race coming from Europe. It is ironic that the two decades after the end of slavery in Brazil were deeply marked by a period of intense theories of biological inferiority of black people and the superiority of the white race (1990:10). Skidmore notes:

“The anthropological theories, which even went to the point of ‘proving’ Aryan superiority by measuring cranial capacity, were reinforced by the social-Darwinist doctrines dominant in England and the United States. Because of their inherent biological inferiority, so the reasoning went, darker races were bound to be dominated and perhaps even eliminated, by the “stronger” Aryans” (1990:10). In addition, Skidmore argues that racist theories deeply influenced Brazilian intellectuals who began to treat blacks in Brazil as an object of study and in many cases as laboratory subject. Nina Rodrigues, who was the chair of legal medicine in the Bahia Medical Faculty from 1891 until 1905, became the pioneer in this field of study. He focused on the study of blacks and mixed bloods people. Rodrigues believed that, “Criminal tendencies among blacks, for example, were explained by analyzing their skulls. His approach greatly

influenced the succeeding generation of anthropologists and sociologists (such as Afranio Peixoto and Arthur Ramos)” (Skidmore 1990:11).

Rodrigues believed so strongly in those theories that he officially recommended criminals to be treated differently according to their race. Skidmore pointed out that it was not surprising that Brazilians intellectuals absorbed racist ideas from Europe and the United States. There were many European books written by racist thinkers in Brazilian schools. European visitors to Brazil often criticized Brazil’s large population of blacks and mestizos. In addition, European and North American visitors brought with them their countries’ racist ideas. During this period, Brazilian intellectuals believed that Brazil was deeply inferior to Europe and the United States (1990:11).

For Skidmore there was one question: Were Brazilian intellectuals’ feeling of inferiority the reason that made them repeat European racist ideas in Brazil even though Brazilian racial relations had clear signs of being different than Europe’s? It was clear that some members of the Brazilian political elite were adopting European racist ideas in order to attract massive European immigrants to Brazil, which they perceived as crucial to Brazil’s development. Between 1888 and 1914 no attention was given to the masses of ex-slaves, on the contrary, all focus was directed toward the white European immigrants. Jose Verissimo, a well-known intellectual, articulated the racial thought predominant in Brazil at that time. He notes: “I am convinced ... that western civilization can only be the work of the white race, and that no great civilization can be built with mixed peoples. As ethnographers assure us ... race mixture is facilitating the prevalence of the superior element. Sooner or later it will perforce eliminate the black race here. And ... immigration ... will, through the inevitable mixtures, accelerate the selection process” (Skidmore 1990: 12).

White Supremacy in Latin America

In Brazil as well as in other Latin American countries, the whitening phenomenon was based on the idea of black inferiority, high valorization of racial mixing, and the exploitation of women’s bodies (Nascimento 2007: 55). Nascimento argues that the whitening project was first introduced by the early colonizers but perpetuated by abolitionists. She says:

“The Catholic humanist tradition is well represented in the writings of Friar Alonso de Sandoval, who in 1627 was already advocating whitening as a solution to eliminate the ‘black stain.’ Jose Antonio Saco, the eminent nineteenth century Cuban historian, exclaimed: We have no other choice but to whiten, to whiten, to whiten, and so make ourselves respectable” (Nascimento 2007:55).

In Central America, South America, and the Caribbean the process of whitening was covered up by the idea that the European colonizers had created in the colonies a new and harmonic form of race relations based on miscegenation. Two discourses worked as a basis for this view: First was the idea that African enslavement in Latin America and in the Caribbean was not as cruel as it was in North America; basically, it was just a mild and tolerable form of servitude. Second the absence of institutionalized racial segregation as well as the fact that some countries claimed to support equality for all before the law was enough evidence that these were not nonracist societies (Nascimento 2007:56). Nascimento explains:

“Contrary to the common supposition that the anthropological paradigm of ethnicity had introduced a widespread antiracist ideal in these societies, white supremacy remained in force, but with new trappings. The ideal of whiteness was ever present, although sometimes camouflaged, in the praise of racial mixing and the pretentiously antiracist discourse embracing the cultural criterion of ethnicity, which was held up as a guarantee against the existence of racism” (2007:56).

Furthermore, Nascimento argues that the whitening ideology was strongly visible in many of these societies where light-skinned mulattoes and mestizos were turned into virtual whites. In addition, the history of Brazil and almost all other countries in that region were deeply marked by the pervasive imposition of a European identity into populations that were largely composed of indigenous and African-descendant people. Europeans, with the discourse of “Discovery” took possession of lands that were inhabited for millions of years, subjugated populations through a process of genocide from which came about the concept of “Latin America” where a small white ruling elite were successful in dominating and repressing the identities of indigenous and African-descendant peoples (2007:56). Nascimento argues

that, “The sorcery of color, in the end, transform black, Native American, and mixed race – Moreno – populations into ‘Latin’ or ‘Iberian’ ones in assimilation of whiteness” (2007:56).

In Brazil, whiteness has been historically supported by the myth of the three races (white Europeans, black Afro-descendants, and Indigenous, native Brazilians) living in an atmosphere of complete harmony. As Nascimento describes there were almost no proof of miscegenation happening as consequence of interracial marriage in a cordial relationship, but miscegenation largely occurred by the exploitation of female African slaves and indigenous by the Portuguese colonizers (2007:58). However, miscegenation still is celebrated in Brazil as well as other Latin American countries in a discourse that ignores the violence that indigenous and Afro-Brazilian women were subjected to by European colonizers. French ethnologist and photographer, Pierre Verger points out that the sons of white colonizers usually had their sexual initiation with black girls who worked in the master’s house or in the fields; these sexual encounters were marked by the domination of the masters over the slave woman whose body belonged to the masters (2007:59). Nascimento argues that miscegenation as it took place in the Latin America colonies showed no sign of genuine human connection but on the contrary it portrayed the male colonizers’ pervasive violence and domination over women of other races (2007:59).

The Myth of racial Democracy

In 1945 Gilberto Freyre, a Brazilian social historian, published his best-known work: *Casa Grande e Senzala* (translated into English as *The Masters and the Slaves*, 1986). In this work, Freyre highly glorifies the formation of the Brazilian population through the country’s pervasive miscegenation between white Europeans, black Africans, and indigenous (native Brazilians). Freyre articulates that the result of such a racial mix created a unique Brazilian population capable of living in an atmosphere of complete harmony, in other words, in a “racial democracy.” Freyre also portrays early Portuguese colonizers as having harmonious relationships with Indians and later on with Africans (brought to Brazil as slaves) (1945:12).

As France Winddance Twice argues, Freyre created an essential tool to be used against anti-racist activists by portraying the good character of the Portuguese and describing them as gentle masters, free of the hostile racial prejudice characteristic of the British who settled North America (1998:32). Stanley Bailey writes: “This myth was a source of national pride during much of the 20th century, as Brazilians compared their reality to that of a segregated and racially violent United States” (2004:2). Amy Chua law professor at Yale University points out that in contemporary Brazil, the majority of the population deeply believes in the myth that Brazil is a “racial democracy.” In almost every occasion that the subject “race” is mentioned, proud white, black, or mixed blood Brazilians say that, “Everybody here is equal. There is not racism in Brazil.” However, throughout Brazilian history, an image emerges of a country rooted in pervasive racial inequalities by color and race. The white and light-skinned classes always had complete economic, social, and political power in the country. (2003:70). Chua argues that, “Throughout Brazil the most prestigious and highest-paying jobs in business, politics, and universities are held by those with light skin. Brazil’s exclusive private schools are glaringly white” (2003: 71). Chua also notes that there are millions of poor dark-skinned Brazilians who live in the ghettos of large cities and poor rural areas, working in low-paid jobs and filling up Brazil’s prisons. The limited presence of Afro-Brazilians in positions of leadership, and the predominance of Euro-Brazilians in every aspect of Brazil’s society is unquestionable and seen as natural, “commonsense.” (2003:72). Racial inequality in Brazil has become something so pervasive that most Brazilians don’t even question its existence.

The Role of Miscegenation

The African slave’s population in Brazil was larger than in any other country in Latin American. Historically, Brazil always had a large mixed-race intermediate category, which some historians have seen as the crucial point to understand contemporary Brazilian racial relations (Skidmore 1990: 6). Most members of the Brazilian elite believed that miscegenation would gradually “whiten” and therefore, improve Brazilian population. For Skidmore this ideology marked the unique racial formation of Brazil. He notes, “Having rejected the straightforward theory of absolute biological differences, the abolitionists nonetheless believed in racial influences” (1990:9). In other words, contrary to European and North American views of blacks and Indians as innately inferior and incapable of being civilized, in Brazil

emerged the view that race can be improved. This ideology represented a great contrast to the established European and North American biological difference that led to policies of segregation and anti-miscegenation laws. The Brazilian elite believed that intermarriage and European immigration were the ways to whiten the population. They had a deep desire to largely increase the influence of what they called “higher” or “more advanced” civilization (Anglo-Saxon white European). The idea was that the process of whitening could be realized in cultural bases, not necessarily in physiological changes. In other words, the color prescribed to an individual became a reflection of his or her social status. (1990:10).

Denise Ferreira da Silva (1998) Brazilian professor of Ethnic Studies at University of California San Diego points out that miscegenation became the main characteristic of the Brazilian population and the principal racial discourse. The diverse system to classify race and the emergence of a new racial element the “mestizo” (people of mixed blood) as well as the lack of recognition of institutionalized segregation and racial conflicts give the foundation for the belief of Brazil being a racial democracy. For two decades after 1930, Brazil gained the reputation of being a nation that lacked discrimination. It made Brazil look morally superior to many technologically more advanced countries that showed systematic racism toward minorities. The United States and Germany became classical examples of countries with deep racial problems. Today, despite the many documented and visible signs of racial inequality, Brazilians of all races and social classes are still embracing and defending the myth of racial democracy (Denise 1998:34).

Affirmative Action for Brazilian Higher Education and how it challenges the Myth of Racial Democracy

For decades social scientists have pointed out the enormous racial inequality in Brazilian higher education where the presence of blacks, mestizos, and other racial minorities is very minimal. In 2001, during the administration of president Fernando Henrique Cardoso, the politics of quotas for Brazilian higher education was implemented in some state universities generating large debate all across the country.

The politics of racial quotas for Brazilian higher education implemented in 2000 aims to guarantee space in Brazilian public universities for Afro-Brazilians and indigenous (native Brazilian) students. Almost never before, has race been so much discussed in the country. For a nation where a majority of citizens believe in the myth of “racial democracy” such an event definitely generates diverse responses and attitudes. As the result of historical inequality rooted in the legacy of three hundred years of slavery as well as pervasive racism in the socio, cultural, political and economic arenas of Brazilian society, Afro-Brazilian always had extreme difficulty entering Brazilian universities and successfully staying in them. Jaques Jesus professor of psychology and director of the department of diversity at University of Brasilia points out that since the beginning of the creation of institutions of higher learning in the nineteenth-century, there has never been any initiative to integrate Afro-Brazilians into the academy. Today, Afro-Brazilians make up only 2% of students enrolled in Brazilians public universities, while blacks constitute 45% of the Brazilian population (Jesus 2006:10).

Research by the University of Brasilia in 2006 shows a large disparity between the incomes of Afro-Brazilian students in comparison to those of white or mixed-race students. The data show that 57.7% of black candidates who attend Brazilian public universities have family incomes below 1,500 reais (real, the Brazilian currency); however, white candidates have family income of 30% more than black candidates. Another disparity is shown in relation to those whose family income is higher than 2,500 reais where 46.6% of white candidates are represented in this category, while only 20.4% of blacks are (2006:11). Jesus argues that the implementation of a system of quotas or affirmative action to Brazilian higher education is a response to the fact that for centuries Brazilian universities have been a space reserved for the formation of white intellectuals and professionals (2006:12).

According to Lilia G. M. Tavoraro (2008) the policy of quotas was first established in 2000, in the State Universities of Rio de Janeiro (UERJ) and in the North Fluminense State University (UENF). These two institutions were the first Brazilian public state universities to demand 40% of their admission to “self-declared blacks” and those of mixed-blood (2008:145). The Legislative Assembly of the State of Rio De Janeiro established this admission policy in November 9, 2001. In 2004, the University of Brasilia (UNB) became the first federal university to implement affirmative action for black and indigenous

(native Brazilians). The UNB's Council of Teaching, Researching, and Continuing Education (CEPE) established quotas of 20% for black students and in agreement with the National Foundation of Indigenous People (FUNAI) created a program to facilitate the admission of indigenous students to UNB (2008:146). Mala Htun (2004) discusses that even though quotas for higher education have not been the only or even the first racial affirmative action policy in Brazil, it has been deeply impacting the racial discourse in the country. The quotas gained visible national attention especially because in the same period Brazilian black activists were preparing to attend the World Conference on Racism at Durban, South Africa, which aims to link racism to racial inequality (2004:760).

There were many reactions to the quota policy implemented in 2001, initially established in two state universities in Rio de Janeiro State. A large number of Brazilians, mostly white or light skinned, argued that class rather than race is the major obstacle for students entering Brazilian universities. In addition, the quota policy does more than just guarantee opportunity for black Brazilians, indigenous, and other Brazilian racial minorities to attend Brazilian universities. It also impacts Brazilians' views of racial relations in the country. The quota policy created an essential opportunity to openly discuss race a subject that is often ignored and camouflaged by the hegemonic view that Brazil is a nation where people of different races and ethnicities live in complete harmony. In other words, the quota policy challenges the historic belief that Brazil is a "racial democracy." An examination of Brazil's racial formation shows a country deeply-rooted in pervasive racial inequality. Euro-Brazilians and the light-skinned portion of the population have and always had complete control of every aspect of Brazilian society while black Brazilians and other minorities have their opportunities for advancement limited by persistent racism.

Theories of Race

Racial Formation

Michael Omi and Howard Winant argue that there are two main defining ways to see race: one as something fixed and solid and the other as an illusion, something merely constructed by human imagination. They articulate that both of these views need to be challenged in order to reshape the way that both views are presented and debated. In addition, they argue that, "The effort must be made to understand race as an unstable and 'decentered' complex of social meaning constantly being transformed by political struggle" (1994:55). From a racial formation perspective, race is defined as subject of both social and cultural representation (1994:55). The theory of race formation assumes that society is shaped by different racial projects in large or small scale in which many people are represented. In those terms race becomes "the common norm" and the main ways to understand, explain and relate to groups of people. (1994: 55).

According to Da Silva, Winant's (1994) application of the theory of racial formation in racial politics in Brazil reveals that the emergence of racial formation in Brazil taking place in the 1970's when a black movement begun its organization giving foundation to a view of Brazilian society as having "culturally and socially" diverse racial groups. Winant points out that it was during the transition from military rule to democracy, that race finally enters Brazilian political discourse giving terms to a racial formation in Brazil. However, he argues that even though some phenomena such as the black music style called "Afrofoxes" that was able to portray the black race in a more open way and to valorize black identity in a way that spoke out to millions of Brazilians, still "Brazil is characterized by the relative absence of racial politics" (2004:145). What accounts for this absence? Winant points out that more so than in the United States where the government tried to enforce regulations to divide white and blacks, and also more so than in some colonial societies pointed out by Fanon, where the white-black division was articulated in national terms, Brazil had and has the strongest case of racial ambivalence. Winant defines racial ambivalence as the non-existence of a line of separation among whiteness and blackness. He argues that some black movements in Brazil have difficulties in trying to organize a black ethnic consciousness because those social movements go against the Brazilian national hegemony of being a non-racial nation.

Color-Blind Racism

Sociologist Eduardo Bonilla-Silva (2003) argues that some white people use color-blind racism as a way to continually reproduce racial inequality in a discourse where they sound and try to act non-racist. Color-blind racism is portrayed with the belief that race is a thing of the past and that race no longer

matters. Color-blind racism is contextualized in the following four frameworks: *Abstract Liberalism*, which enforces the idea of equal political opportunities for all. This theory advocates that individuals' success in society depends only and solely on their personal capacities. *Abstract Liberalism* does not take into account elements that shape people's lives regardless of one's intelligence and hard work ethic. *Naturalization* is a frame in which whites explain racial inequality by suggesting that they are natural occurrences. Within this framework it is common to hear that racial minorities like African-Americans, Latinos, and Native Americans don't do well in school due to their innate intellectual capacity. Another frame is *Cultural Racism* which relies on cultural arguments such as "African-Americans are poor because they have too many kids" or "Mexicans don't put much emphasis on education" to explain the misfortunes of racial minorities in society. The last is *Minimization of racism*; in this frame some suggest that racism is not as bad as it used to be. It is common to hear that discrimination is no longer a factor that affects minority's lives. Some will argue that, "There is discrimination, but there are many jobs available out there" (Bonilla-Silva 2003: 25).

Bonilla-Silva explains that color-blind racism is a discourse that indirectly or directly blames the victim (racial minorities) for their misfortunes in society. The four frames of color-blindness give ruling white elite a range of arguments to discuss racial issues in ways that limit the masses from having a more conscious and realistic view of race (2003:25). In Brazil, often we can hear people using combinations of color-blind racism frames such as abstract liberalism and minimization of racism to articulate arguments such as "Aqui somos todos iguais" (Here we are all equal) or "Can estuda serio sempre vence" (Everyone who studies hard enough always succeeds). In addition, when color-blind ideology is challenged by a black Brazilian activist pointing out the various forms of racial inequalities present in the country, there are people who will argue that black Brazilians are at a disadvantaged position compared to whites because black Brazilians' lack of interest in education, and unstable family structures, which are forms of cultural racism. Once again, black Brazilians enormous disadvantages in comparison to white Brazilians are seen as individual troubles or cultural weaknesses rather than the result of the legacy of three hundred years of slavery, exclusion from full citizenship in Brazilian society, lack of educational opportunities and jobs with living wages.

Seth Racusen professor at Anna Maria College points out that deep-rooted in Brazilian history and well-articulated in powerful ideology is the idea that everyone belongs to the nation. Brazilian color-blindness is stronger than in the United States (2004:776). He also notes that the power of colorblindness shapes Brazilian public policies, and public and private relationships. The first claim is that public sectors do not see the difference between people of diverse races or colors. Second, color-blindness claims that Brazilian private sectors do not make racial distinction between people in the hiring process (2004:776). Racusen also explains that Brazilian color-blindness is stronger than in the United States because historically Brazilian ideology of racial democracy claims to include blacks, browns and Indians as Brazilian citizens differently from the U.S that did not historically include African Americans (2004:776).

Conclusion

The quota policy does more than just guarantee opportunity for black Brazilians, indigenous, and other Brazilian racial minorities to attend Brazilian public universities, it also impacts Brazilians' view on race. The quota policy created an essential opportunity to openly discuss race a subject that is often ignored and camouflaged by the hegemonic view that Brazil is a nation where people of different races and ethnicities live in complete harmony. In other words, the quotas policy challenges the historic belief that Brazil is a "Racial Democracy." A simple examination of racial relation in contemporary Brazil, show a country deep-rooted in pervasive racial inequality. Euro-Brazilians and the light-skinned portion of the population has and always had complete control of every aspect of Brazilian society while blacks Brazilians and other minorities have had their opportunities for advancement limited by the persistent of structural racism.

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Utilizing Twitter in Higher Education Academic Courses to Increase Student Success and Engagement

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As the technological skill level of the average higher education student increases, post-secondary academia is facing a new challenge to evaluate current curriculum and pedagogy to include these advancements. Academic scholars have been utilizing technology in the classroom for almost a century. First with overhead projectors in the 1930s, calculators in the 1970s, and computers in the 1980s ("The Evolution of Technology in the Classroom", n.d.). Professors are increasingly utilizing YouTube videos, online articles, and more to assist in their students understanding of curriculum. The next logical step to aid in a students' academic journey is the use of social media, such as Twitter, Facebook, Instagram, and more. This article will focus on Twitter, and examine if utilizing the social media application in a higher education academic course will increase student success and engagement. Research for this article only includes resources from 2013 to present, as social media and technology change rapidly.

Twitter

The social media application began in 2006. Twitter users create messages that at one point were no longer than 140 characters, however, in the fall of 2017 this character limit was extended to 280. In 2007 the first hashtag was used, (Smith, 2016) which allowed users to easily sort through various tweets based on a topic. Twitter has two different dimensions of user-generated content, the first is self-generated content, where the user creates and shares information or updates on their own Twitter page. The second is other-generated content, where the user shares posts by retweeting other users tweets (Jin, 2013). There are 310 million monthly active users on Twitter, 500 million tweets sent every day, 29.2% of US social media users are Twitter users, and 83% of the world's leaders are on Twitter (Smith, 2016). One of the most well-known is the 45th president of the United States, Donald J. Trump, with over 42 million people following his twitter handle @realDonaldTrump.

Generational Theory

To explore this concept further, generational theory is an important piece of the puzzle. The four generations that comprise most of American society are: the Silent Generation, (1925-1945); Baby Boomers (1946-1964); Generation X or GenX (1965-1981); and the Millennials (1982-1999). Millennials are also known as Net-Generation, Gen Y, GenerationMe, Gen Net, and Digital Natives (Schullery, 2013).

Student Demographics

The current generation of traditional-aged college students, the Net-Generation, were born into a world of technology and access, and are incredibly tech savvy. Their interests most likely revolve around multimedia and Internet content. In addition, as incredible multitaskers, this group can effectively navigate social media applications, visual messages, and web browsing by utilizing smartphones, laptops, tablets, MP3 players, and more in today's media-saturated environment (Downs, Tran, McMenemy, & Abegaze, 2015).

Net-Generation students are digital, prefer interactions online, grew up with a computer in their home, and believe that technology is a social experience. They see social media as an opportunity to personalize

and customize the information they not only receive, but also produce. For these students, engaging with social media, especially social networking, is a cultural and behavioral norm. They embrace new media quickly and have abandoned desktops for laptops and smartphones, preferring wireless access and gathering information on the go. Information production, consumption, and circulation is expected to be mobile, fast, and 24/7 (Martínez-Alemán, 2014).

Faculty Demographics

When researching whether Twitter use in the classroom will be successful, one needs to not only consider how students will utilize the technology, but faculty as well. In order to calculate the various generations represented by faculty in higher education, there are limitations in the ability to collect age data nationwide as there is not any aggregated data that is made available. The National Center for Education Statistics, Longitudinal Studies Branch, stated that they haven't conducted the National Study of Postsecondary Faculty (NSOPF) that included the age of postsecondary faculty since the Fall of 2003 (Aurora D'Amico, personal communication, January 31, 2017). The American Association for University Professors (AAUP) did not have this data either, primarily because it isn't required on the Title IV surveys dispersed through the federal government. In addition, universities do not collect this information due to privacy concerns (John Barnshaw, personal communication, February 2, 2017). However, as of January 31, 2017, the average age of a Central Washington University faculty member is 49, (Nina Oman, personal communication, February 2, 2017).

When assuming then that the average age of postsecondary faculty nationwide is 49, this would mean that they are on the border of being either Baby Boomers or Generation X'ers. Generational theory would conclude then that the majority of faculty have only discovered social media recently and are beginning to have some measure of social-media cultural competence, as well as mastering their computer-based communication skills across generational lines. Within this group of postsecondary faculty, attitudes about social media, knowledge of the technology, and computer-mediated communication skills have improved (Martínez-Alemán, 2014). However, faculty have reservations about its pedagogical value, and weigh the costs and benefits of utilizing social media as an instructional tool. The time to learn how to use these tools inhibits their enthusiasm to do so, and is a function of the professional-productivity demands they encounter (Martínez-Alemán, 2014). In addition, faculty are concerned about privacy and students knowing intimate details about their personal lives, and vice versa. Faculty in these generations are concerned that this may change the dynamics of the faculty-student relationship and impact the professor's professional legitimacy (Martínez-Alemán, 2014).

Current Trends

It is important to critically analyze the role social media plays at colleges and universities nationwide in the academic classroom. Faculty in the humanities and arts, professions and applied sciences, and the social sciences use social media at higher rates than those in natural sciences, mathematics or computer science, (Cao, Ajjan, & Hong, 2013). In a survey through the Babson Survey Research Group, faculty of any tenure status, career stage, or gender, had heard of social media. Eight out of ten had social media accounts, but only 30 percent said they use social media to communicate with colleagues and students (Martínez-Alemán, 2014). It is also reported that faculty often use online videos in their courses, as well as podcasts and wikis, but rarely use Skype or Twitter to communicate with students (Martínez-Alemán, 2014). This could be seen as an opportunity and the next natural step in student/faculty digital communication.

There has also been a huge increase in participation of adult users, ages 35 to 64, at 50 percent or more, and over 30 percent of adults ages 65 and older are users (Martínez-Alemán, 2014). In the year of 2009 to 2010 alone, use by adults 50 and older doubled. In 2012, the increasing time adults spent on mobile apps and accessing the Web through mobile devices accounted for 63 percent in the time users dedicated to mobile social-media use (Martínez-Alemán, 2014). Therefore, if it is to be assumed that the average age of postsecondary faculty is 49, then more and more of these educators are transitioning and becoming more familiar with online communication through social media.

Pedagogy

Research shows that when evaluating the different preferences by faculty and students to social media applications, faculty may first want to evaluate the compatibility of these tools and applications with their teaching styles. Faculty tend to make the decision to use social media in the classroom based on the fit and compatibility between existing teaching tasks and social media technology capability (Cao, Ajjan, & Hong, 2013).

However, when faculty incorporate Twitter into their curriculum and students are not only required to use the social media app, but the faculty member also engages with the class regularly, there is an increase in engagement and grades that wasn't seen in a group of students that were given the option to use Twitter. This shows that how faculty utilize Twitter in and outside of the classroom is a huge factor in whether or not there are advancements in student success. Faculty who are more engaged on Twitter with their students will see greater gains in learning outcomes (Junco, Elavsky, & Heiberger, 2013, p. 283).

Feedback from students also suggest that Twitter needs to be a required activity that is integrated into class, and serve as a required assignment. This would ensure more participants to engage with, as students have reported they enjoy Twitter because it provides more information, news updates, and assignment reminders. Most agreed that Twitter provides another means to communicate with other students and instructors (Lin, Hoffman, & Borengasser, 2013), once again, improving student outcomes.

In many ways, Twitter is now serving as online classrooms or updated discussion boards. By meeting this generation of students in their forum, students feel empowered and can build a sense of community in an outlet they are already familiar with, (Acosta, 2014, p. 14). Twitter provides student-centered information sharing by interacting with their peers and others globally.

Twitter has also been examined by researchers as a tool for informal learning beyond the classroom. This platform provides a high level of 'small talk' between students without any constraints and for students to be a part of someone else's learning process by reading, commenting, discussing or simply enhancing it. This informal learning indicates engagement in the learning process (Prestridge, 2014, p. 99) and the ability to students to continue to critically analyze and explore topics outside of the classroom.

Lastly, a recent study implemented a pedagogical approach that focused on enabling students to enhance their learning with Twitter. When the professor supported conversation through tweets, replies, and retweets, the greatest amount of interaction occurred. In addition, complex concepts presented in class or lectures could be discussed by providing an outlet for rich discourse around course content, playing a role in learning outcomes (Prestridge, 2014).

Launching the scenario

When incorporating Twitter participation as part of a higher education course, it is imperative that faculty members allot adequate time and resources to the planning, implementation, and assessment stages. This ensures success for both the faculty members, as well as the students, to meet learning outcome goals and to increase positive and effective participation.

Planning

When beginning implementation of Twitter as part of the course curriculum, it is helpful to begin with a timeline for the academic quarter or semester that includes deadlines and requirements. In addition, faculty need to address any strategies for overcoming challenges, like some of those listed above, such as addressing any generational differences, privacy concerns, or training gaps between use and incorporation of social media into the academic environment. Therefore, it is important to test these technologies in the classroom before fully implementing them into class structures (Jacquemin, Smelser, & Bernot, 2014, pgs. 25-26).

Twitter is a free social media application, however, there are some concerns that may need to be addressed, such as students that do not have access to a smartphone, those with limited data plans, etc. It would be critical to provide students with the resources and information to aid in these trepidations, such as how to connect or provide access to any free wifi or computer labs available on campus.

Training is also another piece to the planning process. Professors need to look at their curriculum and decide if it is best to share tutorials, videos, or other training manuals and the student is required to review on their own time, or if a part of the first class should include a thorough training program. When faculty

educate students on how to use Twitter effectively, which includes not only how to send a tweet but also other technical tasks and privacy settings, there is a greater percentage of success. Preparing students is important, and just because students may be familiar with Twitter, it should not be assumed that they understand the entire application and how to use it effectively and efficiently for the classroom environment. “Assisting in the education of using Twitter is essential in order to have students truly connecting, building social capital, and creating bonding networks that lead to success,” (Acosta, 2014, p. 14-15).

The last critical aspect to the planning stage is the development of standards and expectations for the class. This could be outlined in a social media policy, which can easily be a part of the course syllabus. This document can include any hashtags the students should be utilizing, content expectations, grading, participation requirements, troubleshooting and more. Research shows that in order for students to be successful in any new teaching strategy, they must be provided the tools and expectations at the onset of the program.

Implementation

Throughout the implementation stage, most likely when classes begin, it is critical that the delivery is structured and integrated in academically relevant ways. That the social media policy within the syllabus, privacy concerns, expectations and student learning outcomes, and training needs are addressed. It is also imperative to outline any grading requirements that should include a participation grade, which research shows that making Twitter use a requirement aids in student success and engagement.

Assessment

Assessment is the ability to gather information to improve educational programs or practices. In this scenario, it is important to assess student learning, success, and engagement by considering the entire evaluation process. It is imperative to get student feedback to consider, and implement and modify the scenario if needed. Assessment models should be ongoing over the course of the class to cumulate information to improve the program. In addition, it should be multi-faceted, in order to collect assessment information using multiple methods.

Formative assessment examines various aspects of an ongoing program in order to make changes/improvements as the program is being implemented. Formative assessment attempts to document exactly what is transpiring in a program (Henschel Pellett, 2016) by receiving feedback throughout the entire process. This could be through Twitter, class discussions, or personal communications with the professor. Formative assessment could also analyze the number of students tweeting to assess engagement and participation. In addition, some questions for faculty to keep in mind during this ongoing assessment process are: What should students be learning? What ways are they be growing? What more should I be doing to facilitate student learning and growth? (Henschel Pellett, 2016).

Another tool would be programmatic assessment, which is a tool that looks at the purpose of the education program and if it aids in student development and growth. This type of assessment examines the entire program and not individual students. To effectively evaluate the program professors should ask three key questions: What am I trying to do? How well am I doing it? How can I improve? (Henschel Pellett, 2016).

Lastly, there are traditional measures of assessment, such as end of quarter evaluations or institutional-specific paths to receive student feedback. For example, the Central Washington University Student Evaluations of Instruction (SEOIs), are online evaluations that are available the last week of courses for students to give anonymous feedback. Faculty have the ability to add three to four personalized questions for each course, where a professor could receive feedback on using Twitter in the class.

Methodology

For the current study, the researchers were provided an opportunity to apply and assess the themes, information, and findings of this topic in a higher education class course. This study gathered additional research and data to support findings in this paper.

Context of the Study

Social media has made a tremendous impact on the world, and can be used as a way to communicate with others, share information, network, etc. With these tremendous capabilities, the question of whether or not it could positively impact student success in higher education was the inspiration for this study. Because of United States President Donald J. Trump, our society has seen the impact that utilizing Twitter can have worldwide. With this progress, this study pursued the perspectives of graduate students regarding utilizing Twitter in the academic classroom.

Participants of This Study

The participants for this study were enrolled as graduate students in a masters School Administration Program at a comprehensive public university located in the Northwest region of the United States. The 21 students were enrolled in a four credit School and Community Relations class examining the relationship between the school and community for the improvement of instruction and student learning. The information provided below was derived from a Pre Survey that was administered at the beginning of this study that garnered a 100% response rate.

The demographics of those who responded to the survey show ten (10) males and eleven (11) females, whose median age is 35.6 years (the youngest being 24 and the oldest being 52). Student responses to the survey questions remained anonymous throughout the study period and researchers only looked at the aggregated data after participants' final grades were submitted. Students were provided the opportunity to opt-out of the survey at any time, or to skip questions for which they did not wish to respond. Zero (0) participants opted out of having their survey responses shared in this research and there was 100% participation.

With regard to participants' comfortability with Twitter, fourteen (14) of the students' listed that they had never used Twitter, while one (1) reported utilizing it daily, one (1) weekly, one (1) monthly, and the last four (4) as once in a while. All twenty-one (21) students stated that they had never used Twitter in an academic class. When asked if Twitter can make classes more interesting, five (5) agreed, thirteen (13) students responded neutral, two (2) disagreed, and one (1) strongly disagreed. Most students strongly agreed and agreed, seventeen (17) total, that they would rather get updates for class via email, rather than Twitter, with only three (3) responding neutral and one (1) strongly disagreeing.

The vast majority of students, nineteen (19), marked that they would be accessing their Twitter account through their smartphone, one (1) would be utilizing a laptop, and one (1) would be using a desktop computer. In regards to privacy, five (5) students responded that they had concerns, while sixteen (16) said they didn't. As far as any accommodations that needed to be made in order for students to utilize Twitter in the classroom, nineteen (19) responded that they did not need any accommodations, while two (2) responded that they did, however, neither of these two students reached out for accommodations.

Materials and Procedures

Students were required, during this six-week study, to tweet user-generated content three times a week, and respond to other classmates' tweets with dialogue or critical analysis through retweets three times a week as well. Students were also required to use a course specific hashtag in all communications in order to easily navigate and sort tweets and responses for the use of this study. This requirement was part of their participation grade for the class, which accounted for 30 percent of their overall grade. Information was provided to all students to assist in the navigation and understanding of Twitter, including articles, videos, and program tutorials.

After a review of the literature, the researchers developed two surveys; the first (Pre Survey) with nine (9) questions, including demographic information and the second (Post Survey) with eleven (11). As mentioned above, the Pre Survey was sent to participants at the beginning of the study, during week 4 of the academic quarter and asked demographic-based questions, as well as their Twitter usage and comfortability. The second survey, the Post Survey, was sent at the end of the quarter, during week 10, asking participants dichotomous questions, in addition to open-ended questions regarding their opinions and gathering feedback of their use of Twitter during the study period. All questions from both surveys were used for the focus of this study. The surveys were distributed electronically, through Qualtrics, to all graduate students enrolled in the selected course, and both had a 100-percent response rate. After the

surveys were completed, the researchers used qualitative research protocol to arrive at coded themes for each question and then disaggregated the data per degree objectives.

Post Survey Results

After the 21 students successfully corresponded over Twitter about course-related content during the study period, they responded to a final Post Survey which showed that considering all students were new to Twitter, only two (2) responded at the end of the study period that they felt it was difficult to learn. Sixteen (16) students felt that Twitter was beneficial to utilize during class, and fifteen (15) marked that utilizing Twitter in this course increased their engagement in the course. When participants were asked if they thought that utilizing Twitter positively assisted their success in the class, thirteen (13) responded yes, five (5) no, and three (3) other. In regards to utilizing Twitter to reach out to others in their field to network professionally, only eight (8) students marked yes that it successfully helped them, while eleven (11) said no, and two (2) stated other. However, seventeen (17) students stated that Twitter did in fact aid in their ability to interact with other students in class, while four (4) said no. Lastly, when asked if the participants felt that they could honestly share their thoughts and opinions via Twitter, only ten (10) responded yes, seven (7) said no, and four (4) marked other, stating in general that it depended on the topic that they didn't feel comfortable sharing their true feelings.

Open Ended Question #1

For the open-ended question about students listing their three top positive experiences with utilizing Twitter during this study, coding showed five specific themes and a theme simply titled "Other" that are not outliers, but could not be placed in others themes due to participants' specific responses. The most responses fell into the theme "Access and Sharing Information/Ideas." Of the nineteen (19) whose responses fit this theme, one of the noted comments revolves around utilizing Twitter to share school-specific information. One of the students enrolled in this School Administration program wrote that a positive is Twitter's ability to "celebrate and share student/school successes," as well as "communicate upcoming events." A fellow student used this theme to show how Twitter can also provide access to data and materials by stating that it provides, "many ways to find sources of information," and to "quickly be able to find information."

The next most populated theme, "Twitter Application Benefits," had fourteen (14) responses that looked at the question in a more logistical manner. Of the fourteen responses, six of them noted that the quickness of the Twitter application was a top positive experience. Students commented that a user "can scroll through quickly," and "can send out information very fast to your community."

There are eight (8) responses coded as "Class Engagement/Discussion," and focuses on the ability of utilizing Twitter in the higher education classroom to further students relationship with their peers and extend critical analysis and thinking outside the classroom. One student wrote that Twitter allowed him/her to "stay in touch with classmates 'and' to build community within the class." Another student commented that Twitter, "increases student engagement, participation, and communication."

The fourth most popular theme is "Networking" with six (6) responses. Most of the responses centered around being able to make connections with people and professionals in their industry or area of interest all around the world. One student wrote that "learning from a vast professional network of educators who use Twitter to share information" was a positive aspect of using the program.

"New Tool Acquisition" is the next theme with five (5) responses. Students noted that by using Twitter in the classroom it required them to learn a new skill, which would be a positive attribute for these future school administrators.

Lastly, there are five (5) responses coded as "Other" because their remarks did not fit into any, one, theme. An example of the responses is "different" or "collegial focus."

In concluding the data for this question, one (1) of the survey-takers left their response blank for this question.

Open Ended Question #2

Logically, the next open-ended question is about students listing their three top negative experiences with utilizing Twitter during this study. Coding showed twelve (12) specific themes, including another theme titled “Other.” The most populated theme is “Character Limit” with thirteen (13) responses. Even though shortly before the start of this study Twitter extended the character limit from 140 to 280 characters, many students still felt that this was still not an adequate amount of space to tweet. A student commented that the, “character limit is too small to have any real conversations.”

The second most populated theme is “Time Commitment/Fast-paced,” with seven (7) responses total. This theme revolves around the idea of Twitter frequency, and that there is too much information being shared too quickly, and in order to keep up, a large amount of time is necessary to commit to using the application.

The next four coded themes (3, 4, 5, and 6) are all close in number of responses. The third theme “Finding Engaging Topics” had five (5) responses and provided insight into how, at times, when using Twitter in a higher education classroom, there may be a lack of interesting or engaging topics worthy of continued discussion. Students wrote that it is, “hard to find quality tweets to re-tweet to classmates,” “and it can be difficult to maintain genuine dialogue. “Resource Limitations,” the fourth theme, also had five (5) responses, wherein one student stated that “not all students have access to internet and computers.” With regard to “Lack of Instruction,” the fifth theme which had four (4) responses, centered on the notion that students were not provided enough educational instruction on how to use Twitter before participating in this study. The sixth theme “Other” had four (4) responses, and just like the previous open-ended question, these are not outliers, but could not be placed in others themes due to participants’ specific responses, such as, “uncomfortable.”

“Requirements for Class” had three (3) responses and addressed respondents’ frustration with the requirements of this study. Students noted that “3 tweets and retweets were a lot per week, it felt forced sometimes, I almost forgot a few times!” and another stated that he/she “feel pressured to say something, even when I don't have anything to say.” “Distraction,” which had three (3) responses as well, provided information as students exhibited their concern that using Twitter in the classroom may be more of a disturbance than advantageous.

The last four themes had two (2) responses each. “Political Bias/Climate” was a theme where students expressed it was, “difficult to find tweets without political bias” and “the political climate has left a bad taste in my mouth for using it.” The “Privacy” theme centered on concerns that personal information would be public, and the “Unsolicited Content” theme addressed frustrations with advertisements being displayed within the Twitter feed. In the last theme, “Target Audience,” respondents voiced apprehensions about using Twitter as a school administrator due to potential lack of use by parents and community members.

In concluding the data for the open ended questions #2, where students provided their three top negative experiences utilizing Twitter in the classroom, three (3) of the survey-takers left their response blank.

Open Ended Question #3

The last open-ended question of the final survey, “as a future administrator, can you see yourself using a medium such as Twitter as a means of disseminating information?” had sixteen (16) respondents mark yes, two (2) no, and three (3) other. Students that marked yes had three (3) themes in the comment section. The most popular theme, “Communicating Updates/Information,” had fourteen (14) responses, and most students stated that Twitter allowed them to easily communicate school updates, event and emergency information, student success stories, etc. much more easily as future administrators. The next most populated theme was “Staff Resource/Professional Development” with four (4) responses total. This theme centralized around the idea that Twitter can be used for staff to enhance their skills and knowledge. One student wrote, “our staff is always sharing articles and other information with one another. A medium like twitter would be awesome to use for something like this.” The last theme is “other,” with just one (1) response. As with the many “other” themes in this article, this one response is not an outlier, but could not be placed in other themes due to the participants’ specific response, which, in this case, was “I will try!” For the students that marked no for this question, there were two (2) responses in this

category; “maybe for basic updates but that is it,” and “it was a fun experience, but not my preferred communication method.” Lastly, there were four (4) students that marked “other” for this question, and their responses focused on concerns that their target population of parents and community members didn’t use Twitter, therefore it may not be a good use of their time. One of these students also commented that they didn’t feel Twitter was very professional.

Recommendations

Evident from the literature and study, there are three areas of recommendation. The first is that faculty members including Twitter as part of their course should make it a requirement and associate a certain percentage of a student’s grade to participation and activity. This will provide a sense of accountability for the students and encourage involvement. In addition, it is imperative for the professor to be just as engaged, if not more, to provide feedback, encourage dialogue, and assist in creating a safe environment for sharing. Furthermore, in order to create an environment on Twitter that encourages further dialogue and critical analysis outside of the classroom, we recommend faculty provide articles, videos, and other training materials for students at the beginning of any implementation.

The second recommendation is to encourage students to utilize Twitter in the classroom to not only network with their peers, but also with those in their respective careers or industry. Twitter provides a channel of communication with professionals all around the world in way that is quick, easy, and readily available. Increased professional networking can aid in a student’s ability to find post-secondary education employment, and assist in specialized development and growth.

We also recommend further research and studies on other variables, such as students and faculty within different collegiate areas of study with vastly different course content, and different impacts to campus environments. In addition, areas to explore further would be the use in primarily non-traditional students, private versus public institutions, including community colleges, and online versus in-person classes.

Conclusion

Over the course of this study, most student’s comfortability with Twitter moved from “none at all” to all student’s participating actively and ended the study stating they felt it was “beneficial to utilize during class.” Twitter can be a successful tool for student engagement and success in the higher education classroom, as long as the recommendations are addressed in the planning and implementation stages.

As social media becomes an increasingly large part of daily communication, and as new generations of students walk through the halls of campuses worldwide seeking a post-secondary education, faculty may need to assess their delivery and discussion methods to ensure success.

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Integrated Language Arts and Social Science Instruction in Elementary Classrooms for English Learners

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Public Schools across the United States have been on the forefront of implementing societal changes involving desegregation, anti-discrimination, and the rights of the disabled to a free and appropriate public education. *Brown V. the Board of Education of Topeka* (1954), *the Civil Rights Act* (1964), *the Elementary and Secondary Education Act* (1965), and *The Education for All Handicapped Children Act* (1975) have all led to significant changes in the US Education System as noted in Table 1.

[Table 1]

Revisions to EHA in 1990 included changing its name to the *Individuals with Disabilities Education Act* (IDEA), and adding two more categories of children with disabilities being served: those with Traumatic Brain Injury, and those with Autism. In 2004 IDEA was once again Reauthorized as PL 108-466 and its name changed to the *Individuals with Disabilities Education Improvement Act of 2004*.

[Table 2]

When the *Elementary and Secondary Education Act* (ESEA) was reauthorized in 2001, its name was changed to the *No Child Left Behind Act* (NCLB). The law was then revised to include nation-wide requirements for Common Core Standards Based Education and yearly assessments of reading and math for pupils in grades three through eight, including assessment at least once for pupils in US High Schools. Schools that received Title 1 funds through the ESEA were required to make adequate yearly progress (AYP) on these tests (Bracey, 2005). If a school consistently had poor AYP results on these tests as summarized in Table 3 below, they were required to develop plans to improve students reading and math skills (Wiley, Mathis, and Garcia, 2005).

[Table 3]

When IDEA was reauthorization in 2004 (PL 108-446) it was expanded to align with NCLB. Schools and teachers were now being judged on the results of the required assessments and in many districts this led to more emphasis on the teaching of reading and math and to the decreasing or eliminating time spent on teaching other subjects such as social science.

Although NCLB (2001) was initially hoped to be an improvement in the education of some children in the nations schools it began to have a negative impact on both schools, children, and educators. NCLB was scheduled to be reauthorized in 2007 but because its sanctions became increasingly debatable the reauthorization was delayed. According to Cuthrell and Yates (2007) in a statement referenced in an article in *The Social Studies* by McCall (2010), “When literacy is integrated with Social Studies, the integration must stress Important social studies goals and objectives, not just teach reading”. Further in that same 2010 article by Dr. Ava McCall of the University of Wisconsin at Oshkosh she stated that, “Social science educators prefer that social studies be integrated with reading and writing rather than be eliminated completely”. In 2010 the Stanford Center for Educational Policy Analysis cepa released a statement on the positive and negative effects of NCLB (Dee, T., & Jacob, B.A. (2010). They found that “Younger children were shown to make “targeted gains in achievement in mathematics... particularly those from disadvantaged backgrounds “. However, they found, “No evidence that NCLB improved student achievement in reading”. They also found that “NCLB shifted the allocation of instructional time toward math and reading, the subjects allocated by the new accountability systems”.

In 2010, President Barack Obama's Administration aware of the concerns by both parents and teachers about NCLB began the development of a better law. The Every Student Succeeds Act (ESSA) was signed into law by President Obama in December of 2015. The ESSA Act reauthorized ESEA and emphasized our country's goal of providing equal access for all students to the national education system. ESSA recognized that No Child Left Behind had become increasingly unviable. Thus ESSA required schools to be accountable for assuring that students be educated utilizing high academic standards which would prepare them for success in careers and college. ESSA also recognized the importance of encouraging collaboration between homes, schools and the community. According to Henderson (2015), ESSA also requires that school districts receiving Title 1 funds must have "a written family and parent engagement policy." Further "each districts shall reserve at least 1% of its Title 1 funds to carry out the family and parent engagement activities... unless 1% of the district's grant is \$5,000 or less.

Integrating Social Science and Literacy Instruction at Providence College: The Logistics

This background serves as the basis for our Providence College integrated Language Arts and Social Studies course. First semester juniors in the Providence College (PC) Elementary and Special Education (ESE) Program have the option of spending their semester on the PC campus in Providence, Rhode Island or at one of two European Study Abroad Programs. All three options require a semester long practicum in an Elementary Classroom. Both the Providence, RI and the Florence, Italy options require practicums in public schools in classrooms with English Learners. The third option involves a practicum with British English speaking students in an Elementary School in Belfast, Northern Ireland. The focus of this paper is on the programs in Providence, RI and in Florence, Italy, both of which require teacher candidates to teach content driven instruction that is informed by the standards of the profession and of the disciplines.

In both locations, teacher candidates participate in approximately 150 minutes of classroom-based instruction each week for fifteen weeks. Candidates in Providence are concurrently assigned to a two-hour weekly practicum in a public elementary school where they engage in supervised classroom teaching under the supervision of both the cooperating teacher and the college supervisor. In Florence, candidates are assigned in pairs to classrooms at a number of different schools around the city that are readily accessible by public transportation. The college course instructor rotates supervision among the schools and observes each teacher candidate in their individual classrooms for a full lesson at least twice during the semester. Weekly supervision and written reports of the PC-ESE teacher candidates is provided by a native licensed Italian teacher who teaches English as a Foreign Language to Italian children. In the Providence location, candidates' practicum is built-in as part of their course schedule. Candidates are all assigned to placements in grades 3- 5, all of which occur at the same time, in the same school. The course instructor accompanies candidates to the practicum site and observes candidates every week, providing feedback to both candidates and classroom teachers on an ongoing basis.

Candidates are responsible for understanding a wide range of academic and professional standards. Professional standards refer to what *candidates* must know; *academic* standards address what they are responsible for teaching to students in different grades. Professional Standards include the Rhode Island Professional Teacher Standards (RIPTS), International Standards for Technology in Education (ISTE; for Professional Educators) World-class Instructional Design and Assessment Standards (WIDA). Academic Standards for the course include the National Council of Social Studies Themes (NCSS Standards), Common Core Language Arts Standards (CCSS.ELA), RI Social Studies Grade Span Expectations (GSEs), and the ISTE Student Standards (for children in the classroom). Additionally, candidates become familiar with the WIDA Can Do Descriptors for Students, which break down what second language students of different levels should be able to accomplish at various grade levels.) Because the standards are complex, it is crucial that early in the semester faculty assist candidates in unpacking them so that they can discern how they intersect and overlap. We discuss how some academic standards have to do with curriculum, while others focus upon behavior management, or the growth and development of the individual student. During the first week of class, students work in pairs to complete activities that promote discussion and interpretation of the standards so that they can then integrate them in lesson plans throughout the semester.

[Figure 1]

Social Studies and Literacy standards are compatible in that they both ask students to think deeply about concepts and to reflect upon their own feelings regarding them. For example, one element of the social studies theme of “Time, Continuity, and Change” states:

Knowing how to read, reconstruct and interpret the past allows us to answer questions such as: How do we learn about the past? How can we evaluate the usefulness and degree of reliability of different historical sources...? (NCSS, 2017)

Likewise, the Grade 5 Common Core Literacy Standards (2018 Common Core State Standards Initiative, 2017) focus upon understanding issues and utilizing texts to investigate them. This, it makes sense for teachers to align these with the Social Studies standard asking students to “evaluate the degree of reliability of different historical sources.” For example:

CCSS.ELA-LITERACY.RI.5.6

Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

CCSS.ELA-LITERACY.RI.5.7

Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

CCSS.ELA-LITERACY.RI.5.8

Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).

CCSS.ELA-LITERACY.RI.5.9

Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

Once candidates are thoroughly familiar with both sets of academic standards they can then understand how, when integrated, the content of both disciplines requires students to become careful, critical readers. Therefore, within the college classroom, candidates learn strategies for the thoughtful teaching of literacy to upper elementary students which they then bring into the elementary classes to which they are assigned. For example, candidates become familiar with comprehension strategy instruction, including predicting, asking questions when reading, making connections, visualizing, comprehension monitoring, inferring, summarizing, etc. Vocabulary strategy instruction includes using context clues, dictionary/thesaurus use, morpheme analysis, academic vocabulary instruction, and cognate analysis for EL students. A focus on questioning strategies assures that candidates are able to help students think at abstract and critical levels. Therefore, in the college classroom candidates become familiar with Bloom’s Taxonomy and student thinking strategies such as Think-pair-share and turn and talk., To assure that candidates understand that the Instruction/Assessment cycle informs all of their teaching, they gather assessment data and use it to determine the next steps for children’s learning, including options for differentiating instruction. These strategies form the basis for HOW candidates approach teaching the content of social studies and how they are able to incorporate a subject into their instruction that may not actually exist within the elementary school curriculum. To specifically apply that knowledge, candidates are responsible for developing a series of lessons. In the Providence program these include an integrated reading strategies lesson, an integrated vocabulary strategies lesson, an integrated technology based lesson, a social studies lesson that focuses on concepts such as reading maps, charts, etc., and a five to six lesson writing unit that teaches one genre of writing and encompasses some aspect of the social studies standards into its design. Candidates are also required to design a virtual field trip; they have the option of teaching this in their classrooms. If they choose to actually teach it, they can count it as their technology lesson. If they don’t teach the virtual field trip, they must design another lesson where students use technology in the classroom. (See appendix for example of virtual field trip).

In both the Florence and Providence locations, teacher candidates utilize specific lesson plan formats to ensure that their instruction includes best practices in instruction. In Florence, students use the SIOP lesson plan model for several lesson plans and the Providence College model for the others. On the Providence campus, candidates utilize a standard lesson plan form that has been adopted for use in all methods courses and in student teaching. These are similar in design because both the SIOP lesson plan and the

Providence College lesson plan focus on teaching standards-based content while also addressing the needs of English learners and children with special needs. Thus, all of the teacher candidates develop an awareness of the need to differentiate instruction and to scaffold lessons within the context of actually teaching. They perfect these skills by working with children of all levels and abilities and by holding high expectations for all. Our lesson plan form (Figure 2) obligates candidates to think about the academic standards and the cultural and learning strengths and needs of their students before they begin planning their instructional sequence, thus assuring that candidates consider necessary scaffolding and avoid a one size fits all model.

[Figure 2]

In the Florence, Italy program, teacher candidates teach English to grade 3-5 Italian students in Italian public schools. Through this practicum field experience teacher candidate have the opportunity to apply what they are learning in the college classroom about both the English Language Competencies for Italian Children (Table 4) and the Sheltered Observation Protocol or SIOP Model (Table 5). The goal of the SIOP Model developed by Echevarria, J; Vogt, M.E; and Short, D. J. (2016), at the Center for Applied Linguistics in New York, is “to make content comprehensible to English learners”.

Italian students begin learning English in the first grade and their developmental levels of English are guided by five basic competencies in listening, reading, speaking, writing, and grammar. Each of the competencies are further broken down into specific knowledge and skill areas. For example, Competency 1: “Listen and understand simple oral messages with notes on vocabulary and structure topics,” is further delineated into the separate knowledge and skill areas. Knowledge for Competency 1 includes the following: Understanding and performing simple procedures and instructions; Understand, identify and match colors, shapes, objects, and animals; and Understand the general meaning of simple messages on familiar topics. The Skills for Competency one include instructions, procedures, greetings, names, colors, numbers, and common objects. In all there are twenty-two levels of Knowledge and Skills in the English Language for Italian Students to learn during their primary school years.

[Table 4]

In Florence, teacher candidates prepare their lesson content using these Italian Competencies along with the standards utilized in the Providence College campus program. They use the Providence College Elementary/Special Education Program Lesson Plan format (Providence College Education Department, 2018) for the majority of their lessons, and they also develop several lessons based on the SIOP model. The SIOP model has eight components of sheltered instruction that are broken down into thirty sub skills aimed at making academic instructional content understandable to English Learners. It is a research based, evidence based model, developed by Echevarría et al (2016) at the Center for Applied Linguistics in New York to make “content comprehensible for English learners.” Teacher candidates always begin SIOP lessons by writing the language objectives on the board in user friendly terms and clearly explaining the content at the very beginning of each lesson. They planned the SIOP lessons using simple, understandable language, and “not watering down” the content. SIOP lessons are formulated to connect with the the student experiences by making explicit links between their background knowledge and the new English language material. Teacher candidates know that when they use a SIOP model they need to speak at a slower pace, repeat language information as needed, and scaffold it as necessary. They also understand that they must make allowances in wait time so that students can process the information, think about it, and prepare a response. During SIOP instruction, lessons need to provide the English learners with practice in speaking English and candidates need to encourage students to answer in more elaborate terms by providing both positive feedback and scaffolded support.

[Table 5]

SIOP lessons encourage English learning students to apply what they are learning and so, in the Florence program, each SIOP lesson included a multimodal English Language Journal entry component. Students wrote in English about their English lessons, copied and illustrated new vocabulary words, and used

their journals to include important lesson facts. Teacher candidates circulated around the room helping children as necessary during this important English journal period. Because the Italian Teachers and their students were very interested in American Culture and Customs, the Italian teachers often asked the PC-ESE student to develop lessons on American Culture and traditions.

SIOP lessons were always delivered in understandable, concrete English language that was appropriate to the level of English understanding of the class. All SIOP lessons concluded with a short summary review of the content and objectives, as well as an assessment protocol of student competencies that was consistent with the Providence College Lesson Plan format (see figure 2). This required candidates to utilize a three-proved rubric that delineated criteria for meeting, almost meeting, and not meeting a lesson's objectives.

Conclusion

Whether in Florence or in Providence, all teacher candidates learned to integrate language arts and social studies instruction in a manner that is consistent with how social studies is taught in elementary schools today. Furthermore, integrating the two subjects is particularly beneficial for students who are English learners because:

- Integrating Social Studies and Literacy instruction allows children who are English learners to engage in content that is meaningful and relevant.
- Integrating SS and Literacy encourages students to participate in authentic conversations and in group activities.
- Integrating SS and Literacy permits teachers to bring back essential curriculum that is often dismissed as irrelevant because it isn't tested by all states.
- The Common Core Standards rely heavily on students reading expository texts, and Social Studies articles that allow children to grapple with current issues and concerns prepares them to think critically about important topics beyond their immediate purview.
- Children who are second language learners are exposed to academic English as they engage in discussions that require them to consider and defend or disagree with perspectives that may be very different from their own.

Appendix

Virtual Field Trip and Lesson Plan Example

(Used with permission of Maura Ingraham and Scott Vinchesi)

Virtual Field Trip:

Exploring the Galapagos Islands

Today we will be leaving your classroom at Spaziano School and traveling far away to the Galapagos Islands with your classmates. You will explore the people, their culture, the environment they live in, and the wildlife around the islands. To make sure you don't get lost, we have planned an itinerary for your entire trip. Make sure you don't leave anyone behind as you discover new things about the Galapagos. You and your partners will start by exploring the wildlife and geography of the islands. Then you will move on to learning about the people who live on the islands and their culture. Lastly you will be learning about a variety of different plants and the environment they grow in.

1. You have arrived at the Galapagos after a long flight from Providence, RI. Now that you are here, it is time to start exploring. Click the link below and follow the directions to complete the activities. Answer the questions on the worksheet as you go.

a. <http://www.pbs.org/wgbh/nova/evolution/explore-galapagos.html>

b. After you click the link, press launch interactive and once you've read the text, press explore. Click explore the islands. Along the left, discover the diverse animals of the islands, then look at the geography of the islands. While you are doing this, answer the questions on the worksheet. Support your answers with information from the passages or pictures on the website.

c. Name three animals that live in the Galapagos and provide two details about each.

d. Name two geographic features in the Galapagos and provide two details about each.

- e. Name four islands of the Galapagos. (Hint: press Show island names in the bottom right corner)
- f. Are there any animals that are similar to the ones you see around Rhode Island?
2. Click the link below and watch the video on the Galapagos. You do not need sound to watch this video. Make sure to keep an eye out for the animals you saw on the last website!
- a. <https://www.youtube.com/watch?v=bq0FO7QUGYs>
- b. Name one animal from the video that you saw on the previous website.
3. Click the link below and read the first two paragraphs to learn about the people who live on the islands and their cultural identity. (Hint: an archipelago is a group of islands and mestizo means a person with mixed Spanish and Native American descent)
- http://www.galapagos.org/about_galapagos/about-galapagos/people-today
- a. Where do approximately 85% of the inhabitants of the Galapagos Islands live?
4. Now that you know about the people who live in the Galapagos, click the link below and watch the first minute of the video about the natives of the Galapagos. Make sure to use your headphones and take turns listening to the video.
- a. <https://www.youtube.com/watch?v=dhKVhr4NzYM>
- b. Were you surprised that so many people live on the Galapagos Islands?
5. You already have learned so much about the Galapagos Islands! You've learned about the people, the animals and the geography. Now it's time to take a look at the plants of the Galapagos. Click the link below and scroll down to where it says Coastal Zone Plants. Explore the Coastal Zone plants, Arid Zone Plants, and the Humid Zone plants. Be sure to take a look at the pictures as well as read some of the articles.
- a. <http://wildfoottravel.com/galapagos/information/wildlife-plants/flora>
- b. Name two types of plants from each of the three zones and provide two details about each plant.
6. You have explored so many parts of the Galapagos Islands in such a short time! You must be exhausted! Now it is time to leave the Galapagos Islands and go back to Spaziano. Make sure you filled out each part of your worksheet and use it to make your boards for multicultural night! I hope you had a great trip to the Galapagos Islands!
- a. What was your favorite part of the Galapagos Islands to explore?
- Name(s): Maura and Scott
- Teacher: Mrs. S
- Date: March 2, 2017
- Grade: 4th
- National Curriculum Standards for Social Studies:
- NCSS 1: Culture
- Social studies programs should include experiences that provide for the study of culture and cultural diversity.
- NCSS 3: PEOPLE, PLACES, AND ENVIRONMENTS
- Social studies programs should include experiences that provide for the study of people, places, and environments.
- Strategy/Skill Focus:
- Using technology to access information about a different culture, their people, and the environment they inhabit. Organizing the research using a worksheet.
- Student Learning Competencies: What will your students know and be able to do as a result of this lesson?
- Students will:
- be able to navigate the virtual field trip effectively to complete research.
 - Use their knowledge of the Galapagos Islands and the culture of the people who live there when making posters for their multicultural night.
- Instructional Materials and Resources:

1. What materials, manipulatives, visuals, etc. will you need for this lesson?

- Desktop/ Laptop Computers
- Headphones
- Virtual Field Trip Document
- Worksheet

Instructional Activities: What activities will you and your students do, and how are they connected to the objectives? Be sure to include sample questions that you will ask, as well as a rationale for the choices of question types. You should identify the level of your sample questions in your rationale statement, as well as your reason(s) for having selecting the particular level(s).

Before Reading/Writing

ACTIVITIES

- 1) The teachers will tell the students that today they are going on a trip to the Galapagos Islands. They will explore the people, animals, geography and plants of the islands. They will navigate through the islands in groups of three and fill out a worksheet to record their findings on this journey. The teachers will tell the students that these findings are very important for their boards for multicultural night.
- 2) The teachers will break the students into groups of three and assign them to computers. The teachers will tell the students to get their headphones because they will need them for the activity. The teachers will help the students open the virtual field trip document on their computers and pass out the packet for their answers.
- 3) The teachers will tell the students to read the virtual field trip document carefully and to make sure they are working together in their groups. The teachers will tell the students that they will be walking around to answer questions or help the students.

RATIONALE

- 1) Introducing the lesson enthusiastically as a field trip is intended to engage the students in the activity. Focusing on a variety of different concepts within the frame of the Galapagos Islands will make sure students have a thorough understanding of more than just the animals or geography of the island. Students will be in groups of three because this will allow all groups to have access to a desktop or laptop.
- 2) When breaking students into groups of three, we will be sure to keep specific learner factors and behavioral concerns in mind. All groups will need headphones to listen to videos throughout the field trip.
- 3) Monitoring student progress as they work will assist us when we are assessing their work later on. We will also be able to provide assistance to students if they are have technical difficulty or trouble filling out the worksheet.

During Reading/Writing:

ACTIVITIES

- 1) The students will complete the virtual field trip in their groups and fill out the packet that goes along with the field trip. (See attached virtual field trip)
- 2) The teachers will walk around to answer any questions that the students have and to monitor their progress.

RATIONALE

- 1) Having the students to work in groups allows them to work together in case they have trouble understanding any parts of the assignment and can move through the assignment more quickly with less difficulty. Having the students fill out a packet allows the teachers to assess their understanding of the research, organize their research so they can use it again and teach them how to research a topic. Questions are mostly knowledge based and require that students access the information online, but some questions ask students to make connections to previous knowledge.
- 2) Making sure that the students are on task and answering questions ensures that the assignment is running smoothly and will be completed without large amounts of difficulty.

After Reading/Writing:

ACTIVITIES

- 1) After the students finish their work, the teacher will collect their packets and tell the students to log off the computers, put away their headphones, and return to their seats.

2) If time allows, the teachers will ask the students what they thought about the virtual field trip and what they learned.

RATIONALE

1) The teachers need to collect their packets to evaluate their work and how well the lesson was taught. The teachers will return the packets the following day so the students can work on their projects.

2) Asking the students what they thought and what they learned allows the teachers to test their comprehension of the lesson, if they enjoyed it, and what the teachers may want to do differently for the next virtual field trip.

Learner Factors/Differentiation of Instruction: How does this lesson accommodate different developmental levels of students? How does this lesson accommodate individual differences in approaches to learning, create connections between the subject matter, student experiences and/or provisions for students with particular learning differences or needs?

There are two students who have IEPs in the classroom, but one leaves at 9:30 to attend a resource room and will not be present for the lesson. There is one student who has a 504 and takes longer to process directions. There is one student who is very low in reading. We will have increased presence in the vicinity of where these students are working to ensure that they are able to participate in their group and complete the tasks. The students will be seated in groups of three around a computer and we will move between the groups to guide the discussion and answer questions if necessary. This lesson accommodates to a variety of different methods of learning, because it includes technology, group discussion, and writing activities. We will provide students who are struggling with prompting questions and given that they are working in groups, we will encourage the students to help each other or ask the teachers if necessary.

Cultural Connections: (If relevant.) How does this lesson pertain to students' cultural/ethnic/economic (etc.) backgrounds? How does it allow students to utilize their developing language skills and/or capitalize on the strengths of their native language(s)?

While none of the students are directly from the Galapagos, there are aspects of the Galapagos that relate to their Hispanic cultures. It is always beneficial for students to learn about different cultures and how they relate to themselves and other cultures they know about. Learning about the Galapagos through a virtual field trip allows the students to study a place through interactive means as if they were there to fully immerse themselves in their culture.

Environmental Factors: What student groupings will be used? What changes might you need to make in the classroom due to instruction, materials, safety, etc.?

The classroom is setup with four tables of five students and one student sits at his own desk in the front. Students will be working in groups of three at a desktop computer in the back of the room or at a laptop in one of the desk groups. We will break students into groups of three by selecting students who sit at the same desk group, because we have observed that these groups work well together. Students may need to move chairs to be able to sit at the desktops at the back of the room, so we will dismiss groups one at a time to ensure this is done safely and efficiently. Students working at laptops will be seated at the desk groups closest to the desktops so we can observe all groups effectively.

Assessment/Evaluation: How will you determine what the students know and are able to do during and as a result of this lesson? What data will you collect (think about how you will do this as you plan your lesson!) . Be sure that you are assessing EVERY objective. Don't use discussion unless you are using anecdotal records!

· Discuss criteria for determining:

O Students who are proficient in meeting the competency:

§ CRITERIA:

● Students were able to answer all of the questions on the worksheet in the time allotted.

§ NEXT STEPS:

● Students are ready to create their trifold posters on the Galapagos Islands for multicultural night.

O Students who are ALMOST proficient in meeting the competency:

§ CRITERIA: ● Students were able to answer a majority of the the questions on the worksheet in the time allotted.

§ NEXT STEPS:

● Students will need to complete more research before beginning their project on the Galapagos Islands for multicultural night.

○ Students who do not meet the competency:

§ CRITERIA:

● Students were unable to complete a majority of the questions on the worksheet in the time allotted.

§ NEXT STEPS:

● Students will need increased assistance moving forward with their research before they can begin their posters for multicultural night. (Navigating webpages, following instructions, organizing information, etc.

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Table 1

Foundational Legislative Forces Effecting Societal Changes in the US Education System

Brown V .Board of Education	1954	The Unites States Supreme Court unanimously ruled that racial segregation in public schools was unconstitutional, and that "separate but equal" was not equal.
The Civil Rights Act	1964	Signed into law by President Lyndon B. Johnson the act prohibited discrimination in public places and barred employment discrimination on the basis of race, color religion, sex, or national origin. It also provided for the integration of schools and other public places.
The Elementary and Secondary Education Act (ESEA)	1965	The intent of the law was to improve equity in educational opportunities for students in economically disadvantaged areas by providing federal funds to their schools.
The Education for all Handi-capped Children Act (EHA)	1975	Public schools were required to provide a free and appropriate public education, in the least restrictive environment to 11 categories of children with disability.

Table 2
13 Categories and One Term of Disability Served Under IDEA

1. Autism	8 Orthopedic Impairment
2. Deaf-Blind	9. Other Health impaired
3. Deafness	10. Specific Learning Disabilities
4. Emotional Disturbance	11. Speech or Language impairment
5. Hearing Impairment	12. Traumatic Brain Injury
6 Intellectual Disability	13. Visual Impairment Including Blindness
7. Multiple Disabilities	14. An <u>optional or additional term</u> used in some states but not in all states is Developmental Delay .

Table 3
 A Sampling of Leveled Sanctions for Not Reaching
 Adequate Yearly Progress (AYP) in Years Two through Six.

Years two through six	Required actions
Second year miss of AYP School labeled “in need of improvement”.	-Develop a two-year improvement plan in the academic area(s) which missed AYP. -Pupils in the failing school are allowed to transfer to a better school in their district if it has openings.
Third year miss of AYP	-School must offer free tutoring and additional educational assistance to students doing poorly.
Fourth year miss of AYP	-School receives the label of “needing corrective action”, which might include replacing the entire school staff, initiating a new curriculum, and/or lengthening the school day.
Fifth year miss of AYP	- Develop a plan to restructure the school.
Sixth year miss of AYP	-Options include: Implementing the restructuring plan; closing the school; requesting that a state or private company take over; or making it into a charter school.

Adapted from: Wiley, E.W., Mathis, W.J., and Garcia, D.R. (2005) *The Impact of the Adequate Yearly Progress Requirement of the Federal “No Child Left Behind” Act on Schools in the Great Lakes Region.* Educational Research Policy Studies Laboratory, Arizona State University, Tempe, AZ

Figure 1: Unpacking the Standards (Gillin, 2017)

<p>Standard:</p> <p>What does your standard mean?</p> <p>How does this look in the classroom?</p> <p>What other standard(s) does this link easily with? Why?</p>
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Figure 2:
Providence College Lesson Plan Form (Providence College Education Dept., 2018)

<p>PROVIDENCE COLLEGE ELEMENTARY/SPECIAL EDUCATION PROGRAM LESSON PLAN FORM</p> <p>Name: Date: Grade: Teacher: School:</p> <p>Common Core/Content Standards :</p> <p>Student Learning Objectives: (LONGER TERM GOAL(S) ... UNIT, ETC).</p> <p>Strategy/Skill Focus or IEP Goal:</p> <p>Learner Factors/Differentiation of Instruction: How does this lesson accommodate different developmental levels of students? How does this lesson create connections between the subject matter and student experiences and accommodate individual differences in approaches to learning and/or provisions for students with particular learning difference or needs? How does it meet IEP or 504 plan accommodations?</p> <p>Cultural Connections: How does this lesson pertain to students' cultural, ethnic, economic, linguistic, racial, etc. backgrounds? How does it allow students to utilize their developing language skills and/or capitalize on the strengths of their native language(s)?</p> <p>Instructional Materials and Resources:</p> <ol style="list-style-type: none">1. What materials, manipulatives, visuals, technology, etc. will you, the teacher, need for this lesson?2. What technological resources will students be using for this lesson and what is your rationale for utilizing them? <p>Environmental Factors: What student groupings will be used? What changes might you need to make in the classroom due to instruction, materials, safety, etc.?</p> <p>Instructional Activities: What activities will you and your students do, and how are they connected to the objectives? Be sure to include sample questions that you will ask, as well as a rationale for your choices of question types. Your rationale should discuss the theory behind your practice.</p> <p>I. Statement of Lesson Overview and Sharing of Objectives:</p> <p>II. Lesson Introduction: Rationale Statement:</p> <p>III. Sequence of Instruction: Rationale Statement(s):</p>

III. Closing

Assessment/Evaluation: How will you determine what the students know and are able to do during and as a result of this lesson? What data will you collect (think about how you will do this as you plan your lesson!). Be sure that you are assessing EVERY objective. Don't use discussion unless you are using anecdotal records, a checklist, or a rating scale. Discuss criteria for determining:

- Students who are proficient in meeting the goals:
 - CRITERIA:
 - NEXT STEPS:

- Students who are ALMOST proficient in meeting the goals:
 - CRITERIA:
 - NEXT STEPS:

- Students who do not meet the goals:
 - CRITERIA:
 - NEXT STEPS:

(To be completed individually by each student after the lesson is taught)

Reflection: Your reflection should focus on the results of your data. Did the students meet your student learning objectives? How do you know? What do the data indicate? Did your assessment instruments provide the information you needed? If not, what might you have done differently? Was the lesson challenging enough? Was it too difficult? What do the data tell you about this? What could you change about your instruction to make it more effective?

Table 4:
English Language Competencies for Italian Students

Competency 1	Listen and understand simple oral messages with notes on vocabulary and structure topics
Competency 2	Read and understand simple texts with vocabulary and structures known topics addressed.
Competency 3	Produce short dialogue exchanges stimulated by visual aids.
Competency 4	Produce simple written texts according to a given model.
Competency 5	Recognize and use simple language structures.

Adapted from: www.indire.it, page 22, October 2014

TABLE 5:
The Eight Components of the Sheltered Instruction Observation Protocol (SIOP)

Lesson Preparation
Building Background
Comprehensible Input
Strategies
Intervention
Practice and Application
Lesson Delivery
Review and Assessment
Please see the website listed below for a very useful detailed explanation. http://www.tupeloschools.com/

The Pleasures and Perils of Publishing a Digital Text

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Introduction

Publishing an e-textbook, like childbirth, involves pain diminished by the joy of new creation. Difficult memories fade; others are worth remembering. For one of the authors, his first view of the digital version of *Strategic Literacy* (2017) was overwhelming. There were vivid images, everything from hornbooks to bobo dolls, amazing pictures that entertained, captivated, and educated. A combination of text, images, and online sites provided the student with the opportunity to learn in a unique and powerful way. This paper grew out of an effort to share the pride and joy of authorship and encourage others contemplating the same journey.

The Publication Manual of the American Psychological Association (2010) noted APA style is relevant to types of articles more common to business than academia. This paper combines elements of a report and a case study. Thus it falls into the APA class of “other types of articles” (p. 11). It discusses the pros and cons of e-books to include cost, student learning, and health issues. It analyzes how to overcome instructor and student resistance to e-textbooks, and the problem of conflict of interest. It spells out how prospective authors of e-textbooks can find a publisher, and it details the experiences of five authors in publishing an interactive e-textbook.

Digital and Print

Interactive e-texts merge traditional textbooks with the most advanced electronic information and communication technologies available. They offer video, audio, powerpoints, cognitive maps, Internet links, supplementary material, testing, and the ability to download forms and lesson plans. These synergistic features engage and inform the reader, while addressing the various learning styles of the students. These unique graphic additions enhance the learning potential of the e-textbook exponentially.

When comparing e-textbooks to print textbooks, it is not so much a question of one versus the other, as it is what is right for the individual in his or her own learning environment. It is obvious e-textbooks are cheaper and lighter than print textbooks, but there is always someone willing to pay for a print textbook. At the same time, there are visual learners, bored with print texts, who jump at the chance to use a digital book. According to Jeremy Greenfield, an e-text industry expert, in his article (2013), “Students Still Not Taking to E-textbooks,” only six percent of college students now use e-text books, but usage is “migrating” in the direction of digital (p. 1).

Cost

The most important force behind the adoption of e-textbooks is price. The cost of textbooks has increased faster than tuition and fees, 800 percent in the last thirty years (College Textbooks, 2015). The average college student paid from \$900 to \$1500 a semester for textbooks in 2015 (College Textbooks). Publishing course materials is a 4.3 billion dollar industry (Musilin, 2013). One maker of educational videos and short films says the cost of textbooks is high because the industry is like piracy, “Everyone wants a cut of the action” (Bostwiki, 2014, p. 1). Half the cost of new textbooks goes to publishers and bookstores (ATTN: Staff). And, of course, the authors receive a royalty for their work.

The textbook industry is not a free market. Students form a captive audience, with no choice in what textbooks to buy. Five companies publish 80% of the texts on the market (Nicholls, 2012, p. 7). Publishers sometimes bundle textbooks, CDs, and learning materials students may not need or want. Another marketing ploy is the special edition. This is a textbook published for a particular university, for example, a Federal Government text that includes a section on state politics. Molly Redden (2011) in her article, “Seven in Ten Students Have Skipped Buying a Textbook Because of Its Cost, Survey Finds,” in the *Chronicle of Higher Education*, noted “many students are unwilling or unable to come up with more money to buy books—one of the very things that helps turn tuition dollars into academic success” (p. 1).

A study, “Demographic Data on Textbook Cost Saving Analysis, University of Michigan” (2012), by Dr. Natsuko Nicholls, Research Manager, showed students have more options besides buying a new textbook; Thirteen percent rented a textbook, eight percent borrowed a text from a friend or classmate, two percent used library copies and one percent rented an e-textbook (p. 32). Nicholls argued the cheapest course of action for students is to buy and resell used textbooks. The problem with this plan is publishers often issue new editions to put an end to the used textbook market. The study also found that if one purchased a new textbook and resold it for fifty-three percent of the initial price, the total cost roughly equaled that of purchasing a digital text (Nicholls, p. 31). Schools interested in lowering textbook costs ought to reproduce this University of Michigan study at their own institutions.

Ten percent of the students surveyed did not have a book for their course (Nicholls, 2012, p. 21). Reporter Nicole Allen (2014) in an article in SPARC, “Survey Says Textbook Costs a Threat to Student Success,” wrote that a growing body of evidence links lack of a textbook to negative academic consequences (p. 1). Kristin Musilin (2013) in an article titled “High Textbook Prices Affect Student Grades, Study Shows” reported eighty-two percent of the students surveyed said they would do “significantly better” in a course, if the textbook was offered free online and the hard copy was an optional purchase.

Even though instructors and students insist reading the textbook affects students’ grades, in practice, students are often overwhelmed by the amount of reading professors expect in college. They may buy the book, but tailor their reading to the demands of a particular course. They can do well in some classes reading chapter summaries or studying vocabulary lists. In others, all they need are a professor’s PowerPoint presentations. In an interview for their study, Aagaard and Skidmore, reported that one student observed, “PowerPoint has taken the place of textbooks. Just go to class and you don’t have to have the textbook” (p. 8).

Podolefsky and Finkelstien (2006) produced evidence that science and math students who did not read the text achieved the same or better grades than those who did read the text (p. 1). They found reading the textbooks helped good students somewhat, but not average and poor students. They concluded reading the text is more a problem in the minds of instructors than students.

Administrators caught in the dilemma of rising salary and health care costs for faculty, try to save students’ money by adopting digital texts. In 2012, Yaseem Abutaleb (2012), technology reporter for *USA Today*, indicated Indiana University, Virginia State, University of California-Berkeley, and Cornell, all require students to buy e-textbooks in selected courses. The Louisiana State University library allows instructors to pick free e-textbooks from over 250,00 titles (LSU library, 2017). If they do not have a particular title the library promises to purchase it. In some schools, students pay a course materials fee covering the cost of e-textbooks for all their courses. Universities negotiate with professors who write e-textbooks for their courses and e-text companies to ensure the lowest possible costs. In 2012, over half of American college students had used an e-textbook in at least one course (de Noyelles et al.).

E-textbooks offer savings of forty to sixty percent of the cost of a new print book (Traditional Textbooks, 2017). A comparable print text to the authors’ e-text, *Strategic Literacy*, cost two-thirds more and contained half as many pages. Publishers, retailers, and authors are predisposed to dislike digital texts because these books earn less profit for them than printed texts. Proponents of print books weight the argument against digital texts by adding the cost of the device used to read the e-text (Phelps, 2017). This argument might have had some merit twenty years ago, but studies show today’s college students have one or more devices on which to read their e-textbook. If they don’t have access to an electronic device,

they can use the computers in the library. In the case of the authors' text, students can also order a free printed copy from the publisher. Of course, they will miss the dynamic characteristics of an interactive textbook.

An excellent poll with striking tables and charts conducted by Harris Poll for Pearson Publishing (N=1,212), "Student Mobile Device Survey" (2015) discovered how imbedded today's students (18-30) are in the digital age (p. 3). One in three students considered themselves early adopters of technology. Black and Hispanic students led respondents in this category (p. 13). The survey examined student use for the following devices: smart phone, tablet, notebook, laptop, and ipad (p. 5). Nine out of ten students preferred a computer to do their schoolwork. Eight in ten regularly used a smartphone. Four out of ten regularly used two or more devices (p. 8). Students strongly believed they needed access to the internet at home, going to school, and at school (p. 36). Students believed they performed better in school with such devices and these electronic marvels made school more fun (p. 7).

Student Learning

Digital texts are interactive, durable, and have substantial content. Students who have reservations about e-textbooks still believe they are the wave of the future. Sixty to eighty percent of students prefer printed textbooks (Crum, 2015). Students in the humanities are more likely to use print books than those in the sciences and mathematics, even if digital books are available for free (Crum, 2015). The answer to removing these obstacles lies more with the nature of the textbook market and how instructors use e-textbooks in their classroom (de Noyelles et al., 2012).

A digital format provides interactive elements like connections to videos, a search feature, and copying not possible in a printed text. As a result, students learn differently and at a faster rate. The US Department of Education concurred that technology based instruction reduced the time students take to reach a learning objective (Szalavitz, 2012). Studies conducted at the University of Leicester in England and University of Indiana, found when the exact same material was presented in both print and digital media; there was no measurable difference in student performance (Sickling, 2013).

Seventy-seven percent of students reported an increase in motivation using digital texts (Etextbooks vs. Print books 2012). Visual students find a variety of learning styles and additional time for practice helpful in learning. Sixty-nine percent of students observed e-textbooks changed the pace of the classroom and reported instructors had more hands-on time with students (Ebooks vs. Paperbooks, 2012). Of those students surveyed, sixty-nine percent expressed a desire to use mobile electronic devices often in class (BookWars, 2015).

There is a plethora of material comparing digital textbooks with print textbooks. A few common sense facts are not in dispute. E-texts are convenient, portable, and searchable. They are easy for publishers to update. History is a great place to start. A history book is a growing adventure. Authors can link to the most current information. They can adjust and grow with the changing environment and conditions (Moushon, 2011).

Many e-textbooks feature access across all connected components, called "bring your own device" (BYOD). One leading publisher offers e-texts that students can highlight, take notes, and view the annotations of other students. E-textbooks have properties that help students with disabilities. Dyslexics and the blind benefit from listening to the text. Students with low or impaired vision can make the text larger.

Studies show students learn from print textbooks and e-textbooks in different ways. When they want to study something seriously and in depth, they prefer print. They look at e-books as resources they can skim to find pertinent material. For this reason, they spend less time reading e-texts than they do print textbooks (Colvin et al., 2012). Students can copy lines and paragraphs in most e-textbooks and print them out. Students reading e-text with links to other sources may hopscotch through the literature. The tremendous amount of information available may result in cognitive overload and a failure to retain or translate new material into conceptual knowledge.

Studies show students do more multi-tasking when reading on screen. Maia Szalavitz, a health reporter for *Time* cited studies suggested students remember things longer when presented in printed form. This is because the brain interprets printed and digital text in different ways. Students read digital

text twenty to thirty percent slower than print (Crum, 2015). Colvin et al. (2012) found eighty percent of the students in their study (N=259) purchased and used a paper textbook even though they had access to it online. This survey showed students often did not use many e-textbook components designed to boost learning (Colvin et al., 2012).

Lottie Nilsen (2016) reported some students favor print textbooks because they want to build a library in their field and found distractions when going online. She reported the comments of one student; “Anytime I really get on my computer, my mind and my hands automatically go to Facebook or Gmail or all the different things I do on my computer every day” (Nilsen, 2016, p. 1). The answer is that instructors must model how to use these features, explain why they are important for student learning, and counsel students on the pitfalls of surfing the net instead of reading their textbook. In print, as well as digital, it is important what you read and how you read it.

Health Issues

Print textbooks are a heavy load on the pocketbook and backs of college students. Pediatricians and chiropractors recommend students carry less than fifteen percent of their body weight in a backpack. The combined weight of print textbooks for any given day exceeds this percentage according to the US Consumer Product Safety Commission. Hence, you see many of today’s students using a wheeled suitcase to carry their books. E-textbooks represent a significant savings in weight. A student can carry all the textbooks they need with a lightweight computer or an even lighter e-reader (Nilsen, 2016). A Harris Interactive Statistics Survey reported eighty-seven percent of students surveyed liked this aspect (Ebooks vs Paperbooks, 2012).

Studies show people with good eyesight complain about eyestrain when reading e-textbooks. However, people with poor vision love the ability to read text in a larger size, a facet of digital texts, or listen to the text. In order to avoid eyestrain, headaches, blurred vision, and dry eyes when reading digital media, students should turn down the backlighting, adjust the device to avoid glare, take regular breaks, and keep their eyes moist. One eye care professional recommended an artificial tears eye spray before starting work, rather than waiting until eyes are sore.

There is plenty of good advice on minimizing computer eyestrain on the web. The American Academy of Ophthalmology stated one can minimize computer eyestrain, by blinking more often. Normally, humans blink eighteen times a minute, according to the website, but blink half as many times while using a computer. Students ought to position the screen below eye level so eyes are not wide open and look at least twenty feet away from the screen every twenty minutes, for at least twenty seconds. Students must get enough sleep and, if they wear contacts, don their glasses for "contact breaks" (Mann, 2013)

A Harvard study indicated that light-emitting devices lead to sleep deprivation. The study found that participants who used e-texts took an average of ten minutes longer to fall asleep than those reading print texts (Crum, 2015). Other studies show people who use mobile devices have a higher incidence of musculoskeletal disorders associated with repetitive strain on muscles, including carpal tunnel syndrome, neck pain, shoulder pain, and fibromyalgia. A discussion in class and quick research of the literature on health problems will help students avoid some of the pitfalls of technology.

Overcoming Resistance.

Most American professors vocally and insistently dislike e-textbooks. Brian Alexander, an education columnist, reported when a survey by Casey Green of the Campus Computer Project asked professors when they would adopt digital materials, one fourth indicated “never” (p. 2). The two main considerations for professors in choosing textbooks were quality and cost. Eighty per cent of the college instructors surveyed admitted digital textbooks were cheaper, but only nineteen percent thought they measured up to the quality expected at the university level. In addition, they believed print material is authentic, natural, and fulfilling; something one can see, touch, and smell (BookWars, 2015). A clear majority of instructors were not familiar with the benefits of digital textbooks. The survey found more support for digital textbooks in community colleges than universities, but also more concern about the availability of devices for students to use them (p. 2).

Instructors persist in requiring students to purchase expensive print textbooks. Dr. Randy Brown (2013) of the University of Mary Hardin-Baylor conducted a survey (N=42) of professor acceptance and use of e-textbooks. Brown found three groups of professors: those who opposed technology in general, those who were not sure e-textbooks were appropriate for higher education, and those who were willing to accept them when appropriate. Brown cautiously concluded, “We need much more research in this area before we jump in over our heads” (p. 212).

Student reluctance

Forty-eight percent of the students used e-textbooks in portable document format (PDF) devoid of extra features according to a 2014 study by de Noyelles et al. at Central Florida University (N=707). Many students and instructors are reluctant to accept e-textbooks because they think of stolid PDFs found online for free. The de Noyelles et al. study emphasized e-textbooks come in a variety of formats besides PDFs. Twenty-four percent of the students surveyed used e-textbooks offering interactive elements. One-quarter used free textbooks available on the Internet. Only six percent reported using an instructor-created e-textbook (p.1).

Research indicated what students prefer in an e-text. O’Hare and Smith (2012) found over fifty percent of their respondents thought the ability to print sections of digital texts was extremely important. They deemed text searching very important by almost forty percent. Students gave highlighting and annotation low importance ratings. In detailed follow-up interviews, students noted their preference for reading e-books in chunks or skimming portions of them. If they found “useful” material, they printed those pages for intensive reading (O’Hare & Smith, 2012).

Several studies showed students and faculty have a mixed, but overwhelming uneasiness about using e-textbooks. According to *Rough Type* (2013), some perceive real advantages in using print text: “fewer distractions, deep engagement, better comprehension and retention” (p. 1). The key of overcoming negative feelings toward digital learning lies in expanding the way instructors teach. De Noyelles et al. (2012) suggested the need for further professional development for instructors including increased awareness, instruction, and active participation.

Instructors shouldn’t introduce digital texts without adequate student preparation, a situation that unfortunately is quite common. Only a third of the instructors who use an e-textbook mention it in their syllabus. Professors should discuss the advantages and disadvantages of digital texts on the first day of class. The best way to change the minds of college students and professors is to prove to them e-textbooks, properly used, will help them accomplish their goals.

These authors examined how an instructor would explain to students how to get the most out of *Strategic Literacy*, (2017). During a first day discussion the instructor should remind students that, while they cannot highlight or annotate *Strategic Literacy* (2017), the text does have a search function, links to websites, videos, and downloads. Students can save and print important sections of the text for reading and study before a test and, if they wish, students can order a free printed copy of the text from the National Social Science Press.

The Future of E-textbooks

College students and professors think of e-textbooks only in traditional face-to-face classes. In the modern world, e-books occur in a number of different settings including online courses with an instructor, or for massive open on-line courses (MOOCS). The latter is a recent development among top tier universities. Harvard, MIT, and Stanford offer free or low cost courses to a large number of students. These courses offer short engaging videos, automated tests, and games. They have a high dropout rate and typically offer certificates of proficiency rather than degrees (Learning New Lessons, 2012).

An investigation of MOOCS found a course on Chinese Language and Culture offered free by the Australian Open University Group, *Open2Study*. It took three minutes to sign up for a four-week course that offered a certificate upon completion and required two to four hours a week. This course featured well-designed videos by Professor Liu Chen of the University of South China located in Guangzhou, PRC. The videos were straightforward classroom lectures with visuals. There were quizzes for each of the seven or eight themes and an assessment (test) over each of the four modules. Communication among all 467 classmates is possible.

Chegg books of Santa Clara, CA. offers another model for renting or selling e-texts to college students. Their eReaders allow students to stream from their favorite device: PC, Mac, or iPad, using popular internet browsers. Chegg e-textbooks offer quick search, note-taking in the margins and 1-click note review, color-coded highlighting, visual bookmarking, inline dictionary, and Wikipedia access. Students can scan important sections and view key highlights from other students using the same e-text. Chegg study solutions offers students answers to study questions and free on-line tutoring for up to thirty minutes (Chegg website, 2017).

E-textbooks lead the way in technological innovation from MOOCs to VitalSource software than can show instructors how much students are reading and how they are doing on quizzes. The next step is McGraw Hills ALEKS math software that builds a database detailing the proficiency of each student, information used to formulate questions tailored to students based on what they find most challenging (Ross 2015). Students can create their own e-texts with software like Kindlegen and Calibre. They can put their notes, research and ideas into their own e-text and have it as a reference during their class or while they are studying for a test (Mouson, 2011). Students can receive individualized instruction from their e-textbooks.

Conflict of Interest

Several states and universities have strict conflict of interest policies. Jane Robbins (2012) in her article, "Is It a Conflict of Interest to Assign Your Own Book," published by *Inside Higher Education*, stated, "If the professor stands to gain from the adoption of the book in her institution, even if the book is judged on a set of criteria to be the best, a conflict of interests exists because she would benefit out-of-role" (p. 1). Kris, in an online response, to Robbins' (2012) article, stated her students liked snacks as "a gesture and the mini-lesson in how publishing and royalties work." But not everyone agreed, Asmythe32 argued, "What a silly discussion! If a professor's textbook is effective in communicating the subject matter and is fairly priced, the author has every right to profit from his/her intellectual work product" (online response Robbins, 2012).

The *Faculty Handbook* of the University of Massachusetts Dartmouth used similar language to forbid faculty members from profiting from instructor-authored materials. It added that employees could receive no royalties or tax benefits and must fill out a Financial Disclosure and Disgorgement Form (Umass Dartmouth).

The University of Akron stated in its conflict of interest policy, "No university employee is to receive private gain arising from the sale of textbooks or other materials used in a course in which the employee is an instructor" (Summary of Principles). The policy outlines common sense courses of action for employees, who may waive royalties or other type of personal gain. They may designate the university or a recognized professional organization as a recipient of the royalties. Employees must submit proposed plans to the appropriate Department Chair. The university requires employees to sign an annual disclosure form (Akron University)

The University of Wisconsin Madison, *Instructor Handbook*, acknowledged that an instructor-authored textbook is often the best and only one available. It stated instructors can mitigate the appearance of a conflict of interest by placing copies of the material on reserve in the library, donating royalties to the University Foundation, reimbursing students directly who provide proof of purchase, and discussing the situation with students (cited in Pecorino).

Two factors mitigate worries over conflict of interest. First, universities are committed to reducing the cost of textbooks for students. Second, universities have dealt with the problem of conflict of interest for a long time with printed texts and have a well-developed set of procedures. There is a copious amount of comment and opinion on the subject. The Association of University Professors noted a conflict of interest is not necessarily unethical (AAUP 2004).

Psychology professor Mitchel Handelsman in a *Psychology Today* (2015) article titled, "Is It Ethical for Professors to Assign Their Own Books?" urged transparency as the best way of dealing with the problem. He suggested practical ways of overcoming this situation. Instructors should communicate directly to the students the reasoning behind the adoption, potential advantages, and what actual profits

they make. Professors might also consider having students suggest a charity for the donation of profits (p. 1).

Philip Pecorino and Jay Weiser (2016) in “Faculty Assigning Their Own Textbooks,” emphasized that since the royalties were small and conflict of interest infrequent, an honor system was more appropriate. They related the story of one professor that bought the students who purchased their textbook dinner as a practical way of avoiding any perceived conflict of interest. E-textbook authors can solve most conflict of interest problems with a little ingenuity and great deal of transparency. The real hurdle for prospective authors is finding the right publisher.

Finding a publisher

There are two basic ways of publishing a digital textbook, publish it yourself, or find a middle or large sized publisher. Authors publish forty-eight percent of all e-textbooks online in PDF format. Some hire a company to enter their book on the world wide web. These books are not interactive. If one desires to self-publish an e-text with more interactivity, there is a free app for that. iBooks Author allows instructors to create beautiful interactive textbooks for iPad and Mac. It brings content to life with galleries, video, interactive diagrams, 3D objects, and mathematical expressions in ways the printed page cannot. Apple’s iBooksAuthor helps teachers to aggregate, curate, and create their own content. iTunes expedites marketing digital books on the iTunes store, app store, and ibooks store (iBooks Author website, 2017).

Preston McAfee, formerly of the California Institute for Technology, a fierce advocate of open access to scholarly materials, published his Economics textbook *Introduction to Economic Analysis for Students* (2006) a free, open sourced, creative-commons-licensed, textbook covering introductory and intermediate microeconomics for students with a working knowledge of calculus. McAfee’s textbook is in a static PDF format. He presents students with a series of problems that they solve sequentially. The answers are at the end of the text. McAfee considered the NSS press honorarium program for test marketing new e-texts a conflict of interest. Perhaps, he has moderated his opinion, now that he is the chief economist for a profit making company, Microsoft.

There are several mid-sized e-textbook publishers on the web. Prospective authors should check to see what they offer in the way of royalties and assistance in publishing work. The National Social Science Press uses a targeted email campaign and offers an honorarium for first time users who provide feedback on the text.

The NSSP website provides a catalogue of e-textbook and YouTube presentations. “The Overall Demonstration” (2010), lists and displays the interactive features of a digital textbook and invites viewers to look at the NSSP catalog. “The Instructional Educator” (2015), contains everything an instructor needs to know who has adopted an NSSP digital text: powerpoints, quizzes, and instructor’s guide. In addition, it explains the review program. The “Instructional Student Video” (2015), leads students step-by-step to access their new digital textbook. The “Thank You for Your Consideration” (2015), video sends prospective instructors a packet and password to look at digital books on the NSSP and/or send them a printed copy. It reminds instructors that NSSP sells their interactive e-textbooks at campus bookstores and online through the National Digital Book Company.

Big companies such as Apple, Amazon, and Pearson offer an amazing variety of e-texts. The Microsoft store offers technical manuals and certification. Search the website of the larger e-text book companies like Apple, Nook-Study, and Chegg. It is helpful to view e-texts similar to *Strategic Literacy* (2017) offered by these major sources. These large companies claim they are always looking for new authors. In reality they generally consider only proven authors of print texts. What they offer in the way of services and savings is more of concern to administrators than individual professors.

Pearson’s *Authors’ Website* (2017) noted “writing a textbook or digital media project is a major undertaking for a new author” (p. 1). They stated the best place to start is to write a prospectus in which the authors describe their experience and the market for their work. If authors submit a prospectus, Pearson asks that they address the advantages of this product over print and submit a prototype of the final product. They offer larger royalties for e-texts (25%) than print texts (10%). Even so, e-textbook authors make less profit than print authors because e-texts sell at a much lower price. The author’s guide

also contains a list of seven reasons why they might turn down a proposal for an e-textbook (Authors' Guide, 2017).

VitalSource offers a million titles to over 7,000 institutions. The company licenses its catalog to a college or university. Students pay a book fee to the bookstore for e-texts for all their courses. The bookstore takes its percentage of the fee and pays VitalSource for the license. Administrators receive analytics with easy-to-use dashboards to provide snapshots of how often and how long students read their e-text. These actionable insights improve student outcomes (VitalSource website). VitalSource offers educators and academic publishers a simplified way to publish e-texts. The VitalSource Content Studio authoring platform provides authors with customizable content managed through a simple interface. It gives them the tools to produce material that are standards based, responsive, interactive, and accessible (VitalSource Launches, 2016).

Suggestions for Authors

Author, Ashley Taylor Anderson (2015) in her article, "Five Things Not To Do When Creating An Interactive eBook," had several excellent suggestions. First, she urged prospective authors to eschew a PDF format. "Interactive eBooks are a million times better than PDF eBooks" (Anderson, 2015). Secondly, she suggested that eBook authors write less. (Textbooks are an exception because of the comprehensiveness, documentation, and high level of writing required.) Third, Anderson suggested careful consideration of visuals because they are "so integral to the story you are telling." The authors of *Strategic Literacy* (2017) considered images early on resulting in a colorful, vibrant finished product. Fourth, she advised authors to employ a thematic approach. The authors chose a different topic for each of the weeks of a semester. Fifth, she urged readers to emphasize a call to action. One of the strengths of *Strategic Literacy* (2017) is the authors stressed the vital importance of literacy throughout and urged reading teachers to strive for excellence.

An Invitation to Participate

First time e-textbook authors need to clarify their intent before publishing an e-textbook. The publishing process will test even the most resolute person. Those who have written a dissertation know the time, effort, and talent it takes to research and write an extended work. But, an e-textbook is not a dissertation. Budgeting time is imperative. A summer or a sabbatical would be ideal. However, potential authors may feel that they need to write a textbook to teach a course the best way possible for their students.

In any writing endeavor, particularly one in which the author seeks to teach others, the author is usually the one who learns the most. Writing an e-book is no exception. The initial consideration in any form of writing is to carefully ponder the intended recipients. College students destined to become elementary school instructors are technologically capable and eager to utilize their skills. E-textbooks complement and encourage their enthusiastic participation. It is time to adapt college classroom instruction to include these aptitudes in the curriculum.

Some instructors decide to produce an original textbook that provides helpful, comprehensive, and inclusive educational material for their students. *Strategic Literacy* (2017) is the compilation of one author's life-long teaching passion updated and extended to reach and teach current elementary instruction students. Five dedicated individuals joined to produce this work as a positive, all-encompassing, definitive educational textbook. The authors of this text encourage others to consider writing and especially utilizing e-textbooks in their classes.

Working With a Publisher

One major consideration for potential new e-book authors is finding a publisher.

Marketing is the most vicious phase in the brutal process of publishing. Those who utilize self-publication are often frustrated. The five authors of *Strategic Literacy* learned from the experience of self-publishing three books, that marketing is crucial.

A publisher's agreement to publish a new e-text includes a contract. Authors must read the proposed contract, discuss it with the publisher, and clarify the author's responsibilities. Authors should consider royalties and delivery of content. One significant fact is the publisher has complete control when a book is ready for publishing. Taking the time to ask questions in this initial phase is extremely

beneficial to both parties. Establish the format and style: APA or other. Determining required number of chapters and page count of each chapter is essential. Select a title to ensure it correctly describes the content indicating not only the subject area but the scope of the work as well.

One very important area is communication. Professors often have multiple email addresses, both personal and professional. Authors should establish one email address for communication with the publisher that is easily accessible, especially during school vacations. They should also create a specific file-naming convention and means of time stamping to avoid confusion. Authors should select one specific postal mailing address that is current for both classroom and vacation time in order to avoid lapses in communication.

All five authors of *Strategic Literacy* (2017) agreed on a practical and positive approach to the subject matter including helpful lesson plans and classroom activities. The authors shared a sincere goal of helping prospective instructors become the best reading, writing, listening, spelling, and speaking instructors in the world. There is pain in the process; but there is also joy in the creation of a technological approach that helps students learn and, at the same time, provides a substantial economic student benefit.

Conclusion

The authors of *Strategic Literacy* (2017) believe in e-textbooks and are proud of the high level of writing in this book. They urge prospective authors to consider writing an e-text and offer helpful information based on the experience. One reviewer described *Strategic Literacy* as the best and most comprehensive in its field. This paper first discussed the high cost of textbooks. Theoretically, the lower cost of e-textbooks should drive down the cost of print textbooks. However, this has not happened in a rigid market controlled by professors, bookstores, and publishers.

This paper described how and when e-texts help students learn. Evidence shows e-texts and print texts encourage student learning in many ways. Today's students live in an audio-visual environment that fosters learning from pictures, charts, and cognitive organizers. Those with vision problems can use a simple hand-held device to increase the size of the print of e-texts. Dyslexics profit from seeing and hearing the text. However, some studies show that, when students study to retain important material, they prefer to see it in print. This is possible with either a print or a digital book. Indeed, there is a way to read and study both types of books. When instructors select texts, they should consider the technological aptitude and interest of their students. E-textbooks provide a plethora of color, graphs, and animation to capture and retain student interest.

The reluctance of some professors to utilize e-textbooks may stem from early offerings. E-textbooks have improved exponentially since their inauguration, moving from stale PDF's to truly challenging and exciting interactive works. Reluctant professors should revisit the current e-publications in their subject area. Some instructors might overcome their reluctance to technology, profiting from in-services and seminars and finding what media helps them maintain their high standards and achieve their classroom objectives. Instructors should at least evaluate an e-book the next time they pick a textbook or are on an adoption panel.

Instructors who wish to utilize a personally authored e-text, must determine if their institution or state will allow it and there is no conflict of interest. Once again, the answer often concerns transparency with the students. When students understand how much money they save, they are usually willing to accept the fact that the professor might earn a small royalty. Students take their cues about e-texts from their instructor. If they know that digital texts save them money and increase the possibility of a good grade, they will support them. Interactive e-texts are exciting new developments that will provide education to more people at reasonable cost.

E-textbooks are the intimations of the future. Some instructors may avail themselves of the opportunity to produce an e-textbook to share valuable information about their academic area. The authors of this paper issue an invitation to join in the endeavor to be part of the future of educational textbooks and offer helpful and necessary information for prospective authors including the assistance they can expect from a publisher and outlining the advantages and disadvantages of individual, middle sized, and large publishers. The growth and future of academia lies in encouraging and including technology and developing bright, colorful, interactive, and informative e-textbooks.

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Brown v. Board of Education to ESSA: Sixty Years of Educational Change?

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Introduction

For approximately fifty years the authors of this paper have taught in both private and public schools, colleges and universities. During this time, we have witnessed, and been involved in, many changes, both substantive and nominal, in both society and education. These changes came about through a desire to improve quality, an increase in social/political unrest, and a difference in how the federal government influenced education. Under the American Constitution, powers not expressly given to the federal government are reserved for the states or the people therein. When public schools first appeared, control of schooling was seen as a local obligation. As the nation grew, control of education moved to the states. Prior to the 1950's, the role of the federal government was negligible. Beginning in the mid-1950's, however, that began to change. This paper will review the role of the federal government from Post WWII to ESSA.

Legal and Legislative Changes

Sixty years had passed between *Plessy v. Ferguson* (163 US 537,1896) when the Supreme Court's "separate but equal" decision had ensured a racial caste system in the United States to the *Brown v. Board of Education* (347 US 483,1954) that up ended that earlier decision to one which prohibited schools from segregating schools by race. The *Brown* decision not only opened the door for educational equality but also fostered the idea of complete social equality as well, a concept that was not well received in the South. In fact, within a year of the decision, a group of 100 lawmakers signed the *Southern Manifesto* protesting the Court's decision of "abuse of judicial power." Within a few short years Civil Rights activists were singing *We Shall Overcome*. The late 1950s and 1960s witnessed civil rights legislation in 1957, 1960, 1964, 1965, and 1969 that would not have been possible without *Brown*.

Following *Brown*, the Leadership Conference on Civil Rights was successful in passing the Civil Rights Act of 1957. This ensured that all Americans would have the right to vote. Only about 20% of African Americans were registered to vote in 1957. Having the right to vote does not necessarily ensure the ability to vote. So in 1960, (Civil Rights Act of 1960) the Court established federal inspection of local voter registration polls and introduced penalties for anyone who attempted to obstruct anyone attempting to vote. President Kennedy's tragic assassination in Dallas, TX in November 1963 fueled the passage of the 1964 Civil Rights Act. On November 27, President Johnson addressed a joint session of Congress to ask for the 'earliest possible passage' of the civil rights bill as a tribute to President Kennedy. He resolutely announced, "We have talked long enough in this country about equal rights. We have talked for 100 years or more. It is time now to write the next chapter, and to write in in the books of law."(O'Donnell, 2014, 6-7). The legislation prohibited discrimination in public accommodations; authorized the attorney general to bring school desegregation suits and the federal government to withdraw funds from schools and other governmental entities receiving federal funds if they discriminate. In 1965, President Johnson issued Executive Order 111375 that authorized federal agencies to enforce the Civil Rights Act of 1964. Under a different president, President Nixon's Executive Order 11478 was signed which required equal opportunity and affirmative action programs in all federal agencies.

Since *Brown*, all decisions were political, not educational. In spite of the dismantling of legal barriers to equality, we ask the question did *Brown* achieve its mission? Ronald Brownstein (2014) a

veteran liberal educational analyst writes, “*Brown* was unsuccessful in its purported mission-to undo the school segregation that persists as a central feature of American public education today.” (Brownstein, 2014,) Rothstein’s study highlights key elements of the American educational system that have evolved since *Brown*.

Although *Brown* stimulated a civil rights movement that desegregated many facets of American society, it was least successful in integrating education, the decision’s aim.

Initial school integration gains following *Brown* stalled and black children are more racially and socioeconomically isolated today than at any time since data have been available (1970).

Academic achievement of African Americans has improved dramatically in recent decades, but whites’ has as well, so racial achievement gaps remain huge.

Schools for black children had enormous resource shortages in 1954. Inequities still exist in some places, although they are much smaller. But resource equity itself is insufficient; disadvantaged students require much greater resources than middle-class white students to prepare for success in school.

Expensive but necessary resources include high-quality early childhood programs, from birth to school entry; high-quality after-school and summer programs; full-service school health clinics. More skilled teachers; and smaller classes.

Even with these added resources, students can rarely be successful in racially and economically isolated schools where remediation and discipline supplant regular instruction, excessive student mobility disrupts learning, involvement of more-educated parents is absent, and students lack adult and peer models of educational success.

Schools remain segregated today because neighborhoods in which they are located are segregated. Raising achievement of low-income black children requires residential integration, from which school integration can follow. Education policy is housing policy.

Correcting these policy shortcomings is essential if the promise of *Brown* is to be fulfilled. (Rothstein, 2014, 3).

These conclusions support our findings of the achievement gap among students on the AP Social Studies exams. “African American students are the most underrepresented group among AP exam takers. They comprise 14.5 % of the total number of public high school graduates in 2012, but were only 9.2% of those who have taken an AP exam, and only 4.4% of those who obtained a score of 3 or better. In contrast,, white students were 58.5% of the total number of high school graduates, and were 56.4 % of those who had taken at least one AP exam. They constituted 61.9% of students who had scored 3 or higher on an AP exam.” (Stevens, 2013, 252-255).

Changes in Organization and Curriculum

Although the 1960’s are looked at as a time of cultural change, the beginning of the decade, until approximately 1966, appeared more like a continuation of the 1950’s. Although the military was involved in a “police action” in South Vietnam, the idea of that exploding into a landmark event for a generation simply had not occurred to most people. The Gulf of Tonkin resolution, passed in August, 1964, changed our role in Vietnam, which lead to a plethora of other changes in American culture.

If a time-traveler from 1968 were to visit a typical U.S. high school in today, they would probably be surprised to see how little change has occurred in the intervening 50 years. The buildings in the schools are subdivided into individual spaces, used for classrooms, and the interior would be painted in some industrial hue, that is neither bright nor welcoming. Both of those descriptions were generally true in 1968. Inside the 2018 classroom, they would find desks that were similar to those used in the typical classroom of 1968. While there might be a few minor changes to the 2018 classroom (usually a telephone in each room, a computer at the teacher’s desk, and, perhaps, a projector mounted on the ceiling, and a Smart Board), for the most part the rooms will appear amazingly similar. The desks in both rooms will still be lined up in neat rows. There will be at least one cork bulletin board. And, the iconic chalkboard will be found in both rooms.

A somewhat more shocking similarity exists in the instruction and in the content being presented. Usually, a textbook will be found in a rack below the seat of the desk. In the 2018 classroom, this book is typically much thicker than a similar book found in the 1968 classroom. (A quick glance through the 2018 book shows that many of the same ideas and concepts presented in the 1968 text are there. At first glance, it appears that, as the years passed, additional content was simply added to the book, while leaving the original content in place.) While instruction is going on, the students will sit in their seats, lined up by rows, as the teacher stands at the front of the room, usually lecturing or asking questions.

Given the changes that have occurred in American society since 1968, the lack of significant change in school organization and curriculum content over the past 50 years is, perhaps, one of the biggest surprises in American Education, especially given that change in both areas has been attempted, only to revert to the traditional models. The standard 20-30 students in a single room, all studying the same content at the same time, is the norm in 2018, just as it was in the 1960's.

As stated, though, change has been attempted. For example, late in the 1960's, several large school districts in the U.S. created "Drop Out, Drop In" centers where students could learn skills, even though they had dropped out of school. Another major movement in organizing schools in the late 1960's and 1970's was the Open Classroom movement. While this movement began primarily in the elementary grades, numerous high schools, and even a few universities, participated in the change. In these "open" schools, walls were, literally, torn down and the spaces were divided by content or task, and not grade level. Behind this movement was a belief that ". America's formal, teacher-led classrooms were crushing students' creativity."(Kirk, 2017). This movement was so large and so strong that many school districts bought in to the idea of open classrooms and started tearing down walls in district schools, only to have to rebuild them in the late 1970's when the problems, including lack of teacher training, excessive noise, and lack of student maturity, were deemed so over-whelming as to not be fixable in the new spaces.

Another area in high schools that has seen change is scheduling. Most high schools in 1968 operated on the assumption that each student would take 6-8 classes each day during the school year. Each class would be 45-55 minutes in length. A modification of the traditional 6-8 classes a day came about when some classes (primarily physical education and science classes with labs) complained about the constrained length of time. The response to this was called a "block schedule." And, block schedules would morph into "accelerated block" and "a/b block" formats. In the late 1980's and early 1990's, though, many high schools were once again either using a traditional schedule or considering returning to a traditional schedule. One of the most radical scheduling changes in the late 1960's through the early 1980's was known as "modular scheduling." In schools where this was employed, the school day was divided into 18-20 minute "mods" and students could register for the courses by scheduling modules, depending on individual strengths and needs.

The area of education which saw the most significant attempts at change, though, was in the curriculum. The 1960's saw more curriculum changes than just about any other single decade in American schools. These changes actually started shortly after the end of World War II, and continued through the early to mid- 1970's. And, these changes occurred not only the sequence of the curriculum, but also to the content of the curriculum.

At the end of World War II, many in the U.S. Government realized that, to a great extent, the nation had not been ready for war when Pearl Harbor was attacked and when Germany declared war. Our military enlistment was low and our technology was nowhere near the cutting edge. The military draft, which had been instituted in 1940, was continued after the conclusion of the war. However, along with the recognition that the Army needed additional people, it also needed people who could work in technological areas. Because of this, the U.S. Selective Service added aptitude testing as part of the military conscription process. The idea was to find those with technical aptitude and use their talents in the new high-tech areas of the military." (Schubert, 2000).

The aptitude tests, however, yielded some unexpected results. According to Goodladd,

The recruitment of young men for the armed services had revealed shocking inadequacies in the science and mathematics programs of high school graduates.

The problem was partly the limited quantity of work in these areas, partly the quality of what had been taught. The secondary school curriculum too often reflected knowledge of another era, instead of the scientific advances of the twentieth century. Recognizing their responsibility for this unhappy state of affairs, scholars in a few fields began to participate actively in what has now become a major curriculum reform movement .(Goodladd, 1964, 99. 9, 13-14, 52, 59).

The response to this discovery marked the beginning of a curriculum reform movement in the United States that reached its zenith in the years between 1956 and 1975. Most of this movement was centered on activities of the National Science Foundation, although they had actually started prior to NSF involvement. The first documented activity in the movement was in 1951, with the University of Illinois Committee on School Mathematics (UICSM), which was supported with funding from the University of Illinois, the United States Office of Education, and the Carnegie Corporation.” (Goodladd p.13). This project, under the direction of Max Beberman, created a curriculum movement in mathematics which became known as "New Math."

The major player in the curriculum reform movement, though, was the National Science Foundation. The need for scientific research and education had been recognized as a national need as early as 1944, when President Franklin Roosevelt became especially interested and concerned with the development of scientific education. In a letter to Vannevar Bush, the Director of U. S. Office of Scientific Research and Development, Roosevelt exhibited his interest:

Can an effective program be proposed for discovering and developing scientific talent in American youth so that the continuing future of scientific research in this country can be assured on a level comparable to what has been done during the war. (Subcommittee on Science, 1975).

The tipping point, of course, was the launching of the Soviet Sputnik, on October 4, 1957. (<http://history.nasa.gov/sputnik/>) This event, more than any other, raised public awareness and concern to a level where the Congress felt pressure to act.

The first move in this direction was the funding of the work of the Physical Sciences Study Committee (PSSC). The grant, in the amount of \$303,000 (a relatively large sum for NSF grants at the time), was intended to cover the "study phase" of the program.” (Goodladd, 59). From this initial grant, in 1956, the NSF expanded in the curriculum field rapidly, funding programs such as the Chemical Bond Approach (CBA) in 1957; the Biological Sciences Curriculum Project (BSCS) and the Elementary School Science Project, both in 1959; and, the University of Illinois Elementary School Science Project in 1960.” (Ibid. 13-41).

According to Spring, NSF involvement in curriculum development received vital support from President Dwight Eisenhower in a special message to Congress in January, 1958. Eisenhower, concerned about the effect of the Russian Sputnik on national defense, tended to view education as one way of meeting the Soviet challenge. In the message Eisenhower called for a five-fold increase in appropriations for science programs; increased spending for summer institutes to train high school science and mathematics teachers; increased funding for improving content in science programs; and, expanding programs encouraging students to consider careers in scientific fields (Spring, 1976, p. 7-36). All of these programs were under the control of the National Science Foundation. Another section of the message called for an educational package to be under the jurisdiction of the Office of Education in the Department of Health, Education, and Welfare. These recommendations resulted in the passage of the National Defense Education Act (NDEA) in November, 1958 (Spring, 1976, 1-92, 93-185, 100, 104).

As important as the updating of content was, however, of even more impact was how that content was arranged and presented. One of the most significant books of that era, Jerome Bruner's, *The Process of Education* had argued strongly that the best way to teach content was to first teach the students how scholars at the forefront of knowledge learned new content themselves. (Bruner 1960) For example, in a

science class, students would use the “scientific method” to learn the content they were studying, rather than merely learning rote facts.

While Bruner’s theory seemed to fit naturally in the areas of science and mathematics, some problems were encountered by areas generally included in the “liberal arts.” Bruner had argued strongly that each content discipline had a structure and that learning that structure was the key to learning and understanding the content. In fact, to prove his point, Bruner had been the project director for the Man: A Course of Study (MACOS) program in the mid- 1960’s. This program, designed for fifth-grade social studies, was a major departure from traditional fifth-grade social studies program, both in content and structure. “This program, initially very successful, later became the poster child for controversy when it was criticized for both its content and for its funding.” (Kraus, 2010, 309-339). Also, during this time, some curriculum writers argued that the structure of the math and sciences disciplines was much more apparent than the structure in the liberal arts courses.

The biggest problem, though, was that scores on the accepted nationally normed tests began to fall. For a time, proponents of the new curriculum programs could argue that their innovations would take time to register, or that the tests were no longer testing what was being taught. In 1983, the hammer fell. President Ronald Reagan’s National Commission on Excellence in Education published their report, entitled *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence, 1983). Among other things, this report argued strongly for increased use of testing to determine that educational goals were being met. An almost immediate result of this report was a massive jump in the number of states that started mandating testing across the grade levels. Furthermore, this testing is almost the only recommendation from the report that is still being acted on. The importance of testing was reinforced again in 2002, when the “No Child Left Behind” act was passed. (NCLB 2002) Again, the states renewed their efforts to test students to determine the success of the schools.

Recognition of Students with Disabilities

In the 1970s a series of acts were passed to protect Americans with disabilities. Modeled after the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, religion, sex, or national origin, Congress passed Section 504 of the Rehabilitation Act of 1973. This act was the first disability civil rights law to be enacted in the United States. U.S. military service men and women who were injured in Vietnam (1955-1975) faced employment discrimination. “Originally passed in 1974, The Vietnam Era Veterans’ Readjustment Assistance Act (VEVRAA) aimed to provide Assistance to returning Vietnam veterans and to protect them from employment discrimination.” (VEVRAA, 1974. 1). Though these laws appeared to be aimed at adult Americans with disabilities and veterans, an unintended consequence led to passage of Public Law 94-142. Passed in 1975 it guaranteed a free appropriate public education to each child with a disability.

Four Purposes of P.L. 94-142

“To assure that all children with disabilities have available to them...a free appropriate public education which emphasizes special education and related services designed to meet their needs.

To assure that the rights of children with disabilities and their parents... are protected.

To assist States and localities to provide for the education of all children with disabilities.

To assess and assure the effectiveness of efforts to education all children with disabilities.

Source: Education for all Handicapped Children Act, 1975

Through such sustained federal leadership, the United States today is the world leader in early intervention and preschool programs for infants, toddlers, and preschool children with disabilities. The 1975 act has become part of the educational fabric in public education today. The purpose of

the No Child Left Behind Act of 2001 is “to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and state academic assessments.” (Wright, 1999).

A Nation at Risk to No Child Left Behind

The 1983, President Ronald Reagan’s National Commission on Excellence in Education published their report *A Nation at Risk: The Imperative for Educational Reform*. Among other things, this report argued strongly for increased use of testing to determine that educational goals were being met. This report was the catalyst for NCLB, today’s standards-based reform movement. And in fact, is almost the only recommendation from the report that is still being acted upon. After a decade of an underfunded mandate (NCLB) and disappointing results, we ask the question, were we a nation at risk? Based on the sobering results of the state of student’s achievement the panel recommended the following:

“(1) Improve education for all students and (2) develop higher standards. The report urged those in charge of the nation’s schools to chart a more rigorous course and measure student’s progress more systematically.” (Nelson, 2017, 192).

In 1989, President Bush and the nation’s governors agreed to six national goals for education. In an ambitious program called *America 2000* they stipulated the following goals would be accomplished by the year 2000:

1. All children will start school ready to learn.
2. The high school graduation rate will increase to 90 percent.
3. All students in grades 4, 8, and 12 will demonstrate competency in English, math, science, civics, foreign language, economics, arts, history, and geography.
4. U.S. students will be first in math and science achievement.
5. Every adult will be literate.
6. Every school in the United States will be free of drugs and violence and the unauthorized presence of firearms and alcohol. (Jennings, 1998,14).

Clearly, these overly ambitious goals were not achieved. By 2001 both Republicans and Democrats were concerned enough with the state of education in America that they passed the No Child Left Behind Act (2001). The central focus of NCLB was that “States are required to develop a ‘single statewide accountability system’ to ensure that schools and school districts—not individual students—are making ‘adequate yearly progress’ (AYP) in math., English/language arts, and science.” (Nelson, 194). Those of us who have taught for many years before NCLB have a broader perspective of student achievement. We have noticed our college undergraduates come to us less prepared in the areas of writing and critical thinking. To support our observations we can compare actual student achievement before and after NCLB.”NCLB provided that the National Assessment of Educational Progress (NAEP) should be the primary means for evaluating the success of NCLB. (NAEP was long referred to as ‘the nation’s report card’ because it was the only measure of student achievement given periodically to a sampling of students around the nation.) We can also consider evidence such as scores on the SAT and ACT college admissions exams and on the international PISA exams.” (Neill, 2015, 2).

A summary of test scores on the NAEP, SAT and ACT pre-and post NCLB should raise concerns about the value of “high stakes” testing: The rate of progress on NAEP at grades 4 and 8 was generally faster in the decade before NCLB took effect than since. That is a consistent trend both overall and for individual demographic groups, including blacks, English Language Learners (ELLs) and student with disabilities.

Score gaps in 2012 were no narrower and often wider than they were in 1998 and 1990.

The slowdown in math was pronounced, especially at grade 4.

In many cases, the rate of gain slowed even more after 2007.

Score gains slowed after NCLB for English language learners, while score gaps increased between ELLs and non-ELLs.

In three of four grades/tests, score for students with disabilities flattened or declined, while gaps with whites remained unchanged or widened.

Scores for high school students have stagnated. NAEP scores were highest for blacks, and gaps the narrowest, in 1988. Hispanic scores and gaps have stagnated since NCLB

SAT scores declined from 2006 to 2014 for all demographic groups except Asians.

ACT scores have been flat since 2010 for all demographic groups.

PISA scores have declined from 2002 to 2013.

NCLB's failure to even raise scores on other standardized exams should be considered in light of widespread evidence of curriculum narrowing and extensive teaching to the test. Other serious problems such as pushing low scorers out of school and widespread cheating scandals, are also part of the price paid for NCLB's testing fixation." (Ibid., 2-3).. For detailed results see *NAEP Main Results 1998 Reading/1996 Math through 2013* at http://www.nationsreportcard.gov/reading_math_2013/#/gains-by-group

The nation has paid a price for standards based reform, but more, our students today are less prepared than in previous generations. What is needed is a return to a more robust and rich curriculum; one that includes the arts, one that emphasizes critical thinking, one that teaches students how to write well, all the basic requisites of an informed democratic citizen.

Conclusion

Brown v. Board of Education brought about unintentional consequences. Though unsuccessful in de-segregating schools, it ushered legal changes that would indeed impact education. The Civil Rights Acts of the 60s and 70s ultimately lead to a recognition of students with disabilities, probably the most influential impact in the past sixty years. Organizational and curriculum changes leave us wanting. Classrooms and teaching strategies remain very similar to the 1950s. Curriculum innovation during the 60s and 70s went the way of hippies and free love. Conservative forces in government dismantled much of the innovation in the social studies. Funding for science initiatives remain strong through our current STEM programs which also includes an art component. Standards –based reform has been most discouraging. We have witnessed achievement in all academic areas: SAT, ACT, PISA, NAEP reveal disappointing scores. The recommendations from the original report in 1983. *A Nation at Risk* seemed to have failed. Do we need yet another study, *A Nation continues to be at Risk* to make American education the envy of the world?

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K-12 Teacher Candidates' Understanding of ADHD Student Protections Under Section 504

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Attention Deficit with Hyperactivity Disorder (ADHD), sometimes referred to as Attention Deficit Disorder (ADD), is one of the most common *neurodevelopmental* disorders to be diagnosed in children (CDC, 2018). According to the Center for Disease Control (2018), an estimated 6.4 million U.S. school-aged children in 2011 received an ADHD diagnosis by a health care provider as compared to 4.4 million in 2003. This is a startling increase of 42% for children between the ages of 4 and 17 with an ADHD diagnosis (CDC, 2018) and is associated with significant adverse outcomes for students throughout their lives (Spiel, Evans & Langberg, 2014; Evans, Langberg, Shultz, Vaughn, Altaye, Marshall & Zoromski, 2016). Further, the Office of Civil Rights has received over 16,000 complaints alleging discrimination on the basis of a disability in K-12 education with more than 10 percent involving discrimination against students with ADHD (U.S. Department of Education, 2016).

Although ADD remains a frequently used term in schools, the American Psychiatric Association dropped the ADD designation in 2013 from their *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (Shaughnessy & Waggoner, 2015). The new DSM-5 diagnostic criteria for ADHD characterizes this disorder as an individual having persistent patterns of attention problems with or without hyperactivity which impairs functioning of multiple life domains (American Psychiatric Association, 2013). This is an impairment with far-reaching academic and social implications for K-12 students. An ADHD impairment is often first diagnosed in childhood, although some children are not diagnosed until their middle or high school years. Further, students with ADHD are more than twice as likely to have another mental disorder compared to students without ADHD (CDC, 2018). This is an incurable disorder often lasting well into adulthood which present significant challenges for students, parents, and K-12 educators (CDC, 2018).

In the school setting, symptoms often exhibited in children with ADHD are decreased attention, difficulty with impulse control, and over activity. These behaviors lead to serious academic impairment resulting in high rates of course failure, incidences of discipline and suspensions, grade retention, relationship difficulties and trouble with the law (Evans, et. al., 2016; Evans, Langberg, Egan & Molitor, 2014; Keder, Sege, Raffalli & Augustyn, 2013). The challenges for K-12 teachers who lack knowledge and incur frequent negative interactions with students diagnosed with ADD/ADHD. This is especially daunting when faced with supporting the critical needs of students with ADHD behaviors. Teacher candidates in education programs across the nation are also inadequately prepared due to little, if any, training is provided regarding Section 504, Section 504 remedies and protections available for students with ADHD (O'Connor, Yasik & Horner, 2016). Knowledge about the of school-based programs and perceptions surrounding ADHD academic interventions is also rare (Bussing, Koro-Ljungberg, Gagnon, Mason, Ellison, Nogushi, Garvan & Albarracin, 2016). Further, many classroom teachers only have limited knowledge of special education laws to be effective advocates for students (O'Connor, et al., 2016). The role of the classroom teacher necessitates early identification and a working knowledge of

special education laws in order to provide appropriate services for students with disabilities (O'Connor, et. al., 2016). To better support K-12 teacher candidates in education preparation programs, the purpose of this study was to examine pre-service teacher candidates' perceptions and their understanding of ADHD and the protections afforded students under Section 504 of the Rehabilitation Act of 1973.

In K-12 public education, students with disabilities are eligible for accommodations under two federal laws. The primary and most utilized law addressing students with disabilities is the Individuals with Disabilities Education Act (IDEA). The other federal law, increasing in importance, is under-utilized and an often ignored civil rights law, Section 504 of the Rehabilitation Act of 1973. This law also protects individuals with a disability (Zirkel & Weathers, 2016; O'Connor, et al., 2016).

Section 504 of the Rehabilitation Act of 1973 (will be referenced as Section 504 in the remainder of the paper) was the first disability civil rights law enacted in the United States. This law prohibits discrimination against individuals with disabilities in programs receiving federal funding assistance (U.S. Department of Education Office of Civil Rights, 2018). Together with the Americans with Disabilities Act of 2008 (ADA) and IDEA, they protect children and adults with disabilities from being excluded or receiving unequal treatment in schools, employment, and the community (Disability Rights Education and Defense Fund [DREDF], 2018).

The foremost difference between IDEA and Section 504 is found in the definition of a disability. Eligibility under IDEA is aligned to a specific set of disabilities such as a Specific Learning Disability or Other Health Impairment (OHI) where a student may qualify for specialized education and accommodations which are documented and served under an Individualized Education Plan (IEP). A Free and Appropriate Public Education (FAPE) for students with a disability is provided under both IDEA and Section 504. Under IDEA, FAPE is ensured for students who qualify under one or more specific categories; whereas under Section 504, FAPE is ensured through broader eligibility and defined as any mental or physical impairment that substantially limits one or more major life activity – e.g. learning or concentration (Ziekel & Weathers, 2016; Zirkel 2013). The second is specialized instruction for students on an IEP and for students on a 504 plan they receive accommodations in the learning environment. For students with ADHD in K-12 education, this powerful and broad civil rights law means students with disabilities are provided protections and remedies under what is commonly referred to in K-12 schools as a 504 plan. The main purpose of Section 504 plans in schools is to eliminate barriers which prevent students from participating fully in the curriculum (Evans, et al., 2014).

These two overlapping laws can provide dual support for K-12 students with disabilities. According to Zirkel and Weathers (2016), students can be eligible for “double coverage” under both IDEA and Section 504 if they meet the more narrow definition of a disability under IDEA and the boarder definition under Section 504. Thus, K-12 students who only meet the broader definition under Section 504 are eligible for accommodations provided by a 504 plan. In an IEP there is a built in accommodation plan so students do not need both an IEP and a 504 plan.

Under IDEA , students with disabilities must be identified and provided services if they attend a public or private school or state agency receiving federal funding. While both IDEA and Section 504 guarantee a student will be provided a Free and Appropriate Education (FAPE), they apply the criteria for meeting FAPE differently (Bussing, et. al., 2014). With IDEA, the student's IEP team determines FAPE placement which may be in a self-contained classroom or through services provided in a partial or full classroom inclusion setting. For Section 504, a team consisting of stakeholders who have knowledge of the student meet to develop a plan designed to provide accommodations to eliminate barriers preventing students from participating and accessing fully in the curriculum or environment as compared to students without a disability. Although both IDEA and Section 504 consider placement, Section 504 students are placed in general education classrooms (Schumacher, 2015). Schumacher (2015) went on indicating the possibility of multiple implications due to the lack of legal knowledge possessed by general education teachers and schools being concerned with not providing students with evidenced-based accommodations or legal controversies resulting in costly litigation.

Although ADHD is one of the most researched and prevalent childhood brain disorders in the United States with symptoms continuing throughout adolescence and into adulthood, only limited research has

been conducted on pre-service or in-service teachers' knowledge of special education laws or Section 504 requirements (O'Connor, et. al, 2016). Many teachers and trained support personnel lack knowledge of essential legal information about IDEA or the remedies and accommodations required under Section 504 (O'Connor, et. al., 2016; Milletello & Schimmel, 2008). A large study of over 1300 K-12 teachers across 17 states examined the legal knowledge and training of teachers. This study revealed 75% of the teachers surveyed, responded they were (1) uninformed or misinformed about the legal rights of students and teachers; (2) had not taken a school law course; (3) received the majority of their legal information from other teachers; and (4) wanted more school law knowledge (Schimmel & Militello, 2007). According to Schimmel and Militello (2007), "Most teachers are legally illiterate about school law . . ." (p. 257), faulting teacher-certification programs and K-12 professional development training. A more recent, but small study, looked at specific ADHD and Section 504 requirements. In this study, 35 teachers enrolled in a principal education program revealed K-12 teachers, counselors and principals alike were unaware ADHD was covered under Section 504 or there was a requirement for accommodations and modifications (Shaughnessy & Waggoner, 2015). Further, special education is one of the most contentious and litigated topics in public schools (Eckes, 2008), pointing to a paramount need for school law professional development.

The consequences surrounding the neglectful lack of legal knowledge in teacher education programs and K-12 schools is staggering. With teacher certification programs requiring competency and professional organizations broadcasting legal standards and competencies along with the requirement to apply knowledge about school law and education policy, only two states require school law for teacher candidates, Washington and Nevada (Schimmel & Militello, 2007). Given the critical and increasing educational needs of K-12 students with ADHD, teacher education programs are charged with providing useful legal knowledge for pre-service teachers. As classroom teachers take on more substantial roles in the identification and teaching of students with special needs, education law training becomes requisite to knowing how to accommodate and support students with ADHD in schools across the nation and avoid the threat of litigation. This knowledge is vital to students' social/emotional well-being, academic success, and being successful community members.

Because students with ADHD are often disruptive and inattentive, teachers are faced with time constraints and major challenges to make modifications and accommodation with clear messages to students they are a behavior problem (Shaughnessy & Waggoner, 2015). This sends a strong message to teachers they are in need of tools and training to better assist students with ADHD succeed. Further, additional demands placed on teachers and school-based services substantially increases workloads for both identified and newly identified students (O'Connor, et. al., 2016; Gintner & Mooney, 2015). This often leaves teachers and school systems in the lurch not knowing the true impact these needs will bring or if school systems will be able to ward off dreaded litigation due to the lack of effectively managing behaviors and providing ADHD specific accommodations designed to support students with ADHD.

Additionally, many students and their families look to medication to help students be successful. Many times due to physical and hormonal changes in the student's body medication is unable to alleviate or eliminate the student's behavior. To better assist students, parents and doctors; teachers with little training relentlessly fill out time-consuming questionnaires, rating scales and provide performance assessments to help determine whether medications make any appreciable difference (Shaughnessy & Waggoner, 2015). For students, this varying data means struggling with medication adjustments, side effects, variable moods, and sleep disturbances often exacerbating their failure and feelings of isolation and aloneness. In addition, many students with ADHD develop gaps in their learning and become significantly delayed in a number of social/emotional realms, peer relationships and language development compared to their contemporaries (Shaughnessy & Waggoner, 2015) due to the behaviors exhibited and the lack of preparation in teacher education programs..

For many adolescents with ADHD, this neurodevelopmental disorder continues to add years of layering experiences leading to more profound troubled friendships, frequent and intense arguments with parents, ongoing school failure, discipline problems, and legal trouble. Adolescent students with ADHD also experience more vehicle accidents, increased rates of teen pregnancy, and substance abuse all of

which add to a secondary student's academic failure and acute stigmatization fears due to the impulsivity of the disorder. These are of major concern because they often become a catalyst for additional risks (Sibley, Olson, Morley, Campeze & Pelham, 2016) prompting considerably lower receptivity toward academic interventions (Bussing, et. al., 2016). With academic impairment among the most troubling impairment domains for adolescents with ADHD, it is imperative adolescent resistance and stigmatization are addressed through high-quality educational interventions and accommodations by skilled educators (Bussing, et. al., 2016).

Due to the increasing prevalence of students with ADHD in schools, early identification of symptoms by teachers is highly critical. Once identified, students are able to receive appropriate accommodations in the learning environment. Because IDEA has more restrictive requirements and schools have been more focused on meeting special education requirements, they have also been less concerned with defining the use of Section 504 (Schumacher, 2015). Whereas, IDEA has specific categories a student must come under to qualify, Section 504 is less limiting and applies to all individuals with a mental or physical condition that substantially limits a major life activity.

The definitive goal is preparing K-12 teacher candidates to realize ADHD definition and symptoms and enhance the knowledge regarding special population legal knowledge. Because of a heightened need for teacher preparatory change in regard for special population legal rights, this study examined the perspectives of K-12 teacher candidates regarding their understanding of ADHD and the Section 504 protections of students in public schools.

Methodology

Materials and Procedures

The researchers, through reviewing the literature, developed a three question online open-ended survey. The survey was a required course assignment for students enrolled in the undergraduate School Law course, this course is required for all pre-service teaching candidates. Students had the opportunity to opt out of participating in the study. The survey was distributed electronically using Qualtrics. Student responses to the survey questions remained anonymous, as the authors only looked at aggregated data. After the surveys were completed, the authors used qualitative research protocol to arrive at coded themes for each question or prompt and then disaggregated the data per the students' degree objectives.

Participants of This Study

The participants for this study were enrolled as undergraduate or post baccalaureate students at a comprehensive public university located in the Northwest portion of the United States. The population for the study included 66 students. Ultimately, 64 students completed the online instrument and 58 (91%) agreed to participate in the study. Demographics for the study participants were as follows: 52 were seeking a Bachelor's degree and six were seeking post baccalaureate/certification. Students were asked their gender, 19 identified as male and 39 identified as female. The median age of the participants was 22 years of age.

Findings

Like the findings of previous studies, the preservice teachers in this study possessed a rather limited knowledge and superficial, general understanding of the criteria necessary for identification of ADHD. In terms of the procedural awareness and the aspects of identification and referral for support services, the study found preservice teachers lacked the necessary, nuanced understanding of their role and the role of other K-12 personnel in the referral process in two domains: the required duration and persistence of symptomatic behavior and formal observation of the student. Lastly, the study found that conceptual and practical delineation between IDEA and 504 was difficult for preservice teachers to articulate. While this study's findings reflect the findings of other studies, the findings of this study are unique and add to and advance the literature in that we propose the conceptualization of identifying symptoms of ADHD into four specific categorical domains: cognitive self-regulation e.g. attention skills; externalizing behaviors e.g. anti-social behavior and hyperactivity; academic achievement; and emotional regulation to assist categorizing for preservice teachers. The fluid and overlapping nature of the symptoms of ADHD, the myriad manifestations student(s) can exhibit, combined with the subjective evaluations of said symptoms by non-medical experts, necessitates teacher preparation programs begin to conceptualize categories of

these symptoms for non-specialists in ways entry level educators can easily work with and objectively identify ADHD. The following sections elaborate on each of the findings in identification, procedural awareness, and legal categorization briefly discussed above in the literature review, develop the conceptual and practical connections for teachers and teacher preparation programs, and defend the proposed classification system of symptoms alluded to earlier in this paragraph.

Identification

The first question examined preservice teachers' knowledge of the characteristics associated with ADHD. The great majority of participants in the study had difficulty in enumerating the innumerable symptoms associated with ADHD, outside of the traditional inattention and hyperactivity that is generally associated with this diagnosis, what we here respectively dub, cognitive self-regulation and externalizing behaviors. The great majority of participants, 79% (n=45), were able to identify and articulate either cognitive self-regulation or externalizing behaviors as the chief symptoms of ADHD, with 94% of the participants (n=52) in this study identifying cognitive self-regulation and 86% of participants (n=49) identifying externalizing behaviors. Less than 10% of the participants were able to identify and/or enumerate symptoms outside of cognitive self-regulation and externalizing behaviors. For example, only 8% (n=5) of the sample was able to identify academic performance as a general area that could serve as a potential red flag signaling ADHD, with even fewer participants, only 7% (n=4), able to articulate some specific academic criteria through which ADHD could be observed. One of the participants mentioned that low grades could be seen as a potential red flag, another two participants mentioned a difficulty with reading comprehension, and a fourth participant alluded to a student's general struggle with academic content.

Another area of significant concern in terms of identification was in the area of emotional regulation. Only a fraction, 21%, of the participants (n=12) were able to specify symptomatic emotional dispositions that could serve as potential cues of a student possessing ADHD. The number of participants able to articulate emotional regulation as a symptom of ADHD became even more limited when the construct of emotional regulation was more narrowly defined. For example, only 7% (n=4) were able to specify hypersensitivity and/or excitability as a potential marker of ADHD. Even fewer participants (n=3), or 5%, were able to articulate irritability and/or frustration as a potential marker of ADHD.

Procedural awareness

The second question in the study examined what knowledge preservice teachers possessed about the referral process, their role and the role of other institutional agents, in procuring the institutional support and protections that students suspected of possessing ADHD are legally entitled to and must be afforded. The participants in the study communicated a very limited and unsophisticated knowledge of the identification and referral process and even fewer understood their role and the role of others in said process. Only 42% (n=24) of the participants understood, in a very general way, their responsibility as educators to refer the students they suspected of possessing ADHD to specific institutional agents for assistance, but who specifically those institutional agents were, was frequently beyond their ability to identify. The specific people identified by the participants as people whom they should seek out and consult if they had suspicions about a child potentially possessing ADHD varied tremendously and encompassed 8 different institutional personnel.

By and large, the group most identified by the preservice teachers were parents, with 40% (n=23) of the participants stating they would speak to a parent/guardian of the child. School counselors (33%, n=19) and school psychologists (16%, n=9) were the second and third most frequently identified personnel. Less frequently identified groups included referrals to special education teachers (12%, n=7), school administrators (11% n=6), a very broad and general allusion to "specialists" (8%, n=5), fellow teachers (7%, n=4), and even referrals to medical doctors and nurses (3%, n=2).

Only 60% (n=34) of the participants understood that observation was essential to identifying and supporting the learning needs of students who could potentially possess ADHD. The most troubling and significantly concerning area under reported by the participants was in terms of the time duration for which observations should be made. Only 3% (n=2) of the preservice teachers were able to identify or even make a cursory allusion to a time frame for observation and even that was very general and non-

specific e.g. reasonable period of time. The reader should consider one of the findings from the study. Teachers are the first line of defense for ensuring that students with ADHD receive the necessary supports mandated by federal law. If teachers are unaware of the specific symptoms associated with ADHD, as the findings from this study clearly accentuate, then they will not be able to identify the students in need of their referral services and institutional support.

If perchance, teachers are able to identify these symptoms, a scenario highly unlikely because the pre-service teachers in the study clearly did not have a deep understanding of the symptoms they were looking for, these pre-service teachers do not know who specifically to turn to for assistance, and if they do, because they do not know what they should be observing for, and how long they should be observing for, they will find themselves ill-equipped to provide the people who can get their students help the necessary information to corroborate that a student indeed possesses ADHD. Stated more succinctly, the pre-service teachers did not know what they were looking for when it comes to identification of ADHD, nor did they know how long they should look for it, and whom they should turn to for help. When this finding is combined with the earlier findings on preservice teachers' inability to clearly identify the symptomatic behaviors and expressions of ADHD, identification and referral become extremely problematic.

Legal categorization

The last question in the study examined preservice teachers' awareness of the legal distinctions between IDEA and Section 504. 97% of the sample (n=56) stated that a student with ADHD could qualify for placement into Section 504 and 26% (n=15) of the participants stated that a student with ADHD could qualify for protections under IDEA. Only 21% (n=12) of the participants were able to articulate that a student with ADHD could fall under the legal protections of both Section 504 and IDEA. When a more narrowly defined categorical delineation between Section 504 and IDEA was called for, even fewer participants could articulate why placement into either or both of those programs would be merited. Not one of the participants was able to elaborate on the specific criteria that would merit placement under IDEA and/or Section 504. While 57 % of the sample (n=33) made some sort of reference or allusion to accommodations, 36% (n=7) of those references were specific accommodations e.g. "They are given extra time as one of the accommodations. or materials to help with their distracitons (sic), or "the student can receive things like time and a half or a quiet space..."

81% (n=27) of the participants' references to accommodations were cursory or general allusions lacking any specificity e.g. "Under section 504 students with ADD/ADHD must be accommodated to ensure they succeed to the best of their ability", "A student with ADD or ADHD can still be in the general classroom, but they still have accommodations that need to be met". A number of participants also exhibited a clear lack of coherence in their understanding of Section 504 and IDEA with some participants stating factually incorrect statements like placement into Section 504 entailed an IEP e.g. "Typically an IEP is put into place." or "Students with ADD and ADHD are eligible for the 504 plan, but parents are required to fill out the IEP form in order to be eligible". Other participants completely blurred the legal distinctions between the two programs with blanket generalizations like, "...students with ADD or ADHD are entitled to a 504 plan and IEP to allow for a full, individualized learning plan" or patently false assertions like, "under section 504 students with ADD/ADHD must be accommodated to ensure they succeed to the best of their ability". We were unable to follow up on this question to investigate whether such responses were the result of an incorrectly applied label or a reflection of a lack of depth and understanding between these two programs in participants' minds. The greatest take away from this section of the study is that the pre-service teachers were unaware of the very important legal and categorical distinctions between Section 504 and IDEA and what these categorical distinctions meant for their educational practice and the students such legislative policies are aimed to protect and serve.

Implications

For various reasons, the findings around identification discussed above prove problematic for practitioners and preparation programs alike. Chiefly, the great majority of these symptoms when seen in isolation, and in the aggregate, are difficult to objectively evaluate, even after following a prescribed protocol of observation and consultation with the various institutional agents trained to serve this

population. Take for example the symptom of a student having difficulty with their reading comprehension. Any number of possible explanations could be posited for why a child is having difficulty comprehending what they are reading. This difficulty could stem from a lack of appropriate instructional support, a lack of reading material and parental support within the home, a family's inability to secure the financial resources necessary for an annual eye check-up or prescribed lenses, or simply be a manifestation of ADHD?

Or take for example the symptoms of cognitive self-regulation. A bored or fidgety child could be exhibiting the symptoms of ADHD or merely reflecting a disinterest in a particular academic content, a poorly prepared lesson plan that fails to engage the student, or an overabundance of sugar in their daily dietary regimen. In terms of externalizing behaviors, a child's anti-social behavior could be the result of the bullying going on in the school yard, a spat between feuding parents, an expression of the introverted personality unique to their personhood, or genuine symptoms of ADHD. In terms of emotional regulation, the child unable to control their temper may be manifesting symptoms of ADHD or could be simply having a bad day, a rough week, or experiencing conflict in their home. Even when the observation protocol is implemented for the minimum six-month window dictated by the DSM-V, many of these explanatory suppositions have durations that can sometimes extend into months and years so merely introducing a six month window of time for the child to be observed does not discount other spurious explanations for the symptoms students may be exhibiting.

Lastly, as a result of the increased likelihood of misidentification of the symptoms of ADHD, and the importance of said identification for affording students the appropriate support and resources they are legally entitled to, we suggest that education programs begin to re-conceptualize the symptoms of ADHD into 4 broad categories: cognitive self-regulation, externalizing behaviors, academic achievement, and emotional regulation. This classification system is broad enough to capture the breadth of the innumerable symptoms of ADHD, and yet categorically sophisticated enough to be broken down into a series of more narrowly defined, interrelated component parts. The strength of this categorization is that it streamlines an almost limitless number of symptomatic manifestations of ADHD into a framework comprised of objectively identifiable and measurable indicators of students' behaviors that can be concretely assessed by non-medical specialists e.g. classroom teachers. This conceptualization could serve to be a far more productive and helpful way to categorize the symptoms of ADHD than the current framework used by teachers in this, and earlier studies.

Conclusions

Regardless of whether students with ADHD are served under IDEA or Section 504, there are considerable costs (Evans & Langberg, 2014) required for accommodations and litigation threats. To best serve students with ADHD, it is vital for teacher certification programs to provide sound legal and policy requirements for supporting students with ADHD. In addition, it is important that K-12 schools ensure adequate funding, school policies and practices aligned with federal requirements, and teachers receive ongoing professional development. Without appropriate accommodations, students are more likely to incur unintended negative consequences which result in prolonged impairment (Evans & Langberg, 2014).

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Pet Ownership and Reasons for Sterilizing or Not Sterilizing Cats and Dogs: A Survey of Five Rural Kentucky Counties

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There is no government institution or animal organization in the United States responsible for keeping statistics of cats and dogs (ASPCA, 2018). Therefore, obtaining accurate data about pets is difficult and we often have to rely on estimates, some that vary. Estimates suggest that in the United States, 70,000 puppies and kittens are born every day (Animals Abused & Abandoned, Inc., 2016), as compared to approximately 11,000 daily human births (CDC, 2017).

As of the end of 2011, approximately 56% of US households owned at least one cat or dog (American Veterinary Medical Association, 2012). Some pets, however, can no longer be kept, are abandoned, or are stray, and end up in shelters. Current estimates of how many cats and dogs will be cared for by animal shelters nationwide every year vary from 6.5 million (ASPCA, 2018) to 8-10 million (North Shore Animal League, 2016).

These numbers illustrate the country's pet overpopulation problem. Unfortunately, a historical solution to having too many pets and not enough homes is to euthanize from approximately 1.5 million (ASPCA, 2018) to 3 million (HSUS, 2018) pets per year, with a sizable percentage of these being puppies and kittens and other healthy, adoptable animals (HSUS, 2018). The good news is this number has declined in recent years (ASPCA, 2018), partially the result of spaying and neutering programs.

Although commonly practiced, euthanasia as a mean of population control is not the only solution and certainly not the most humane one. There is agreement in the animal welfare community that an excellent alternative is to spay and neuter cats and dogs (Griffin, 2011; North Shore Animal League, 2017a). A move is currently underway to provide more education and higher availability of low-cost spaying and neutering services for pets in order to reduce euthanasia rates (e.g., Animals Abused & Abandoned, Inc., 2016; North Shore Animal League, 2017a), and these programs have been shown to be effective (Clifton, 1994; Marsh, 2003). Despite the increased education and availability, many people choose not to alter their pets. The primary goal of the current research was to understand the reasons people in rural communities give for altering or not altering their pets.

Although scholarly research on why so many people do not spay or neuter their pets is limited, one study in the early 1990s (Manning & Rowan, 1991) addressed this issue. Using a phone survey, they found that 81% of the pets were altered. The most common reasons people gave for sterilizing pets were "desire to avoid unwanted animals" (66.1%), "behavior" (15.8%), and "sterilized when acquired" (8.8%). Major reasons for not spaying or neutering pets were "unnecessary—confined to house/yard" (31.6%), "wanted to breed" (23.7%) and "too young" (18.4%). Cost was cited by only two of the Massachusetts participants (5.5%).

A recent large national survey (APPA, 2016) suggested that 90% of owned cats and 86% of owned dogs are sterilized. The survey results imply that a small percentage of the population is contributing to a large problem. Guerrero (1997) suggests that some people do not realize the benefits of spaying and neutering, and instead subscribe to certain "breeding myths." Some of the myths are: I want to breed my pet, it's a purebred; my pet is male, it won't have any litters; my pet will get fat; and my kids need to experience the birth process.

In the current study, we examined the connections between demographic and pet ownership factors for people in rural, lower-income counties in Central Kentucky, seeking to understand why people in these areas do or do not alter their pets.

Method

Using cell phones with local numbers, five trained surveyors called landlines within a five-county region in Central Kentucky.

Procedure and Materials

After obtaining a current phonebook for each county, surveyors called a systematic random sample of 308 households. Callers used a random number generator to determine the starting page, column, and row in each phonebook, as well as the frequency interval of numbers called. If there was no answer to the first call, the surveyor called back twice at later times before excluding the number.

Callers asked the respondents to complete a “Spay/Neuter Pet Phone Survey” developed by the authors. The survey included demographic information; pet information including number of cats and dogs owned, species, sexes, and which pets were sterilized; a list of reasons for altering or not altering a pet; the perceived affordability of altering a pet; and the likelihood of performing a spay or neuter surgery if certain conditions were met.

Survey Area

Participants completing the phone survey were from households within five rural counties in Central Kentucky. Based on the most recent census data (US Census Bureau, 2010), the counties varied in population from 15,995 to 28,432 and had a combined total population of 107,372. The total number of households for the five counties was 40,204, and of those, the percentage of persons living below the poverty level in the counties surveyed ranged from 15.4%-26.2%, compared to the national average of 13.2%.

Participants

Participants were 71% female, 29% male and averaged 54.9 years old ($SD = 14.9$). The majority (59%) lived in the country and 27.2% still had children in the household. Income was reported within a \$10,000 range (i.e., <\$10,000, \$10,000-\$20,000, etc.). The ranges with the highest percentages were \$10,000-\$20,000 (12.5%), \$20,001-\$30,000 (15.8%), and \$40,001-\$50,000 (13.9%). Overall, 59% reported having a household income less than \$50,000. Surveyors also asked the respondent about the adult in the household who had completed the most education. The highest level of education completed by a household member was: high school degree or less (35%), some post-secondary education but not a bachelor’s degree (26.1%); a bachelor’s degree (19.7%); and coursework toward, or had completed, an advanced degree (19.4%).

Results

Pet owners ($N = 201$) comprised 65.3% of the respondents. Pet owners were significantly younger ($M = 52.32$, $SD = 13.99$), on average, than non-owners ($M = 59.81$, $SD = 15.35$), $t(301) = 4.279$, $p = 0.000$. They also had more children in the household, on average, ($M = .73$, $SD = 1.32$) than non-owners ($M = .31$, $SD = .91$), $t(306) = 2.94$, $p = 0.00$.

Of the households with pets, 154 (76.6%) had at least one pet altered, with another 8 (4.0%) indicating they intended to alter at least one pet in the near future. We also examined differences in spay/neuter rates (all pets altered versus some pets not altered) based on demographic variables. The predictor variables that showed differences were living in the country versus town, education, and household income. All of these predictor variables were separated into two groups for comparison.

With regard to living in the country versus town, respondents who lived in the country reported rates for all pets altered versus some pets not altered at 50% and 50%, respectively, versus those individuals who lived in town had the corresponding percentages of 79% and 21%, respectively, $X^2(2) = 14.72$, $p = .0001$. With regard to education, those individuals who had not attended any college reported rates for all pets altered versus some pets not altered at 47% and 53%, respectively, while those individuals who had at least some college had the rates of 71% and 29%, respectively, $X^2(2) = 10.4$, $p = .001$. And finally, participants who reported a household income less than \$50,000 had corresponding rates for all pets altered versus some pets not altered at 50% and 50% respectively, versus those individuals whose

household incomes were greater than \$50,000 had rates of 69% and 31%, respectively, $X^2(2) = 5.4$, $p = .02$.

Cats Ownership

For the total sample ($N = 308$), 110 households (35.7%) reported owning at least one cat and for households with pets ($N = 201$), 54.7% reported owning one or more cats. In households with cats, there were a total of 293 cats, with 248 (84.6%) of these reportedly owned by individuals living in the country. Of the total cats, 43.7% ($n = 128$) were altered, which resulted in 71.8% of the households (79 of the 110 households with a cat) having at least one of their cats altered.

Dogs Ownership

In the total sample ($N=308$), 168 households (54.5%) had at least one dog and for the 201 households with pets, 83.6% had one or more dogs. The total number of dogs owned was 387, with 296 of those (76.5%) reportedly owned by individuals living in the country. Of this total number of dogs, 186 (48.1%), were reportedly altered. The dogs who had been either spayed or neutered were in 118 of the 168 households with a dog, which is 70.2% of the households that had dogs, had fixed at least one.

Reasons for Altering a Pet

A major goal of the survey was to determine people's reasons for either altering or not altering their pets. Participants who had already altered at least one pet, along with those who intended to alter their pet in the near future (perhaps the pet was perceived as too young), were read a list of reasons people often give for deciding to spay or neuter a cat or dog. Reasons indicated and the percentage of participants endorsing the reason are provided in Table 1 (respondents could indicate more than one reason). As a side note, a separate analysis was run for just those owners who had already altered at least one pet ($n=154$), excluding those who intended to alter a pet. The difference in percentages between the two groups was very minor, with all but one (Avoid the Cost of a Litter) being less than 1%. Avoiding the Cost of a Litter differed by less than a 2%.

Table 1

Most of the reasons reported under "Other" tend to be a rephrasing of one of the reasons that were included in the list. One unique factor mentioned by three respondents (1.8%) was "to avoid the negative problems associated with an animal being in heat."

Reasons for Not Altering a Pet

Of the 201 pet owners, 96 participants (47.8%) reported owning at least one unaltered cat or dog. The surveyors first asked an open-ended question about why they had not altered one or more of their pets and then read them a list of typical reasons people often give for not spaying or neutering a pet. The vast majority of the responses to the open-ended question fell within the typical reasons listed, except for four individuals (4.1%) who indicated they had not altered their dogs because they were "hunting dogs." The reasons indicated for not altering pets and the percentage endorsed are given in Table 2.

Table 2

Three responses under Other were endorsed by at least 2% of the sample: "haven't gotten to it," "pet is inside the house or a pen," or "pet is registered/purebred." The last two responses seem to imply "don't think it's necessary" and "intend to breed."

Perceived Affordability

As is indicated in Table 2, 30.2% of the people who had not spayed or neutered a pet indicated that one reason for not doing so was cost. The survey addressed this point by asking respondents who had not altered at least one cat or dog what they would perceive as an affordable price range. Price ranges were indicated in \$25 increments (i.e., \$0-25, \$26-50, \$51-75...9 > \$300) and the caller coded these ranges from 1 to 9.

The average "affordable cost" of spaying a female or neutering a male cat for an owner who had at least one cat not altered, using the coded values of 1 to 9, was spaying: $M = 1.71$, $SD = 0.90$ ($n=41$); neutering: $M = 1.74$, $SD = 1.04$ ($n = 42$). Interpolating these averages to dollars values suggests an average affordable cost to spay a cat is \$17.75 and \$18.50 to neuter. Furthermore, the perceived average "affordable cost" of altering a dog was reported as spaying: $M = 2.27$, $SD = 1.09$ ($n=64$); neutering: $M =$

2.20, $SD = 1.08$ ($n=66$). Again, interpolating the coded values to dollar values suggests an affordable cost to spay a dog, on average, is \$31.75 and \$30.00 to neuter.

Likelihood of Spaying or Neutering

Finally, respondents who had an unaltered pet was asked on a 7-point scale (1=not at all likely to 7=very likely), how likely they would be to spay or neuter their pet if one of three conditions were met: price is affordable, surgery is free, or if there are health benefits—less chance of cancer, less chance of an accident, and less chance of injury from fighting. Data from these questions are provided in Table 3.

Table 3

Discussion

At least in the rural area in which this survey was conducted, 43.7% of the cats and 48.1% of the dogs were sterilized, meaning the majority of both cats and dogs were not altered. The top reasons given for not altering a pet were related to the following: don't think it's necessary, cost is too high, he's a male and therefore he can't have a litter, and an intention to breed and sell the puppies/kittens. On the flip side, the top reasons for spaying or neutering a pet were: want to control pet overpopulation, want to avoid the cost of a litter, want to keep pet from wandering, and want to eliminate/reduce aggression/fighting. With regard to cost, cat owners who had at least one unaltered cat reported a perceived affordable cost for spaying and neuter at \$17.75 and \$18.50, respectively, for cats. Dog owners who had at least one unaltered dogs indicated, on average, the perceived affordable cost for spaying and neutering was \$31.75 and \$30.00, respectively, for dogs. Finally, with regard to a question on how likely a respondent would be to alter their pet is certain conditions were met, the condition with the highest average endorsement was related to "if there are health benefits—less chance of cancer, less wondering, less aggression," following closely by "If the surgery is free."

At least for the rural area surveyed, there is a sizeable portion of population who have not altered their pets. Even though 72.0% of the households with cats had altered at least one, only 43.7% of the cats have been spayed or neutered. This percentage of cats who have been sterilized is much lower than that reported in a large national survey, where 90% of owned cats were altered (APPA Survey, 2016).

Statistics for dog are similar in that 70.2% of households with dogs had altered at least one, yet only 48.1% of the dogs were sterilized. Again, the percentage of dogs who were altered in this rural area is much lower than that reported in a large national survey, in which 84% of dogs were sterilized (APPA Survey, 2016). For both cats and dogs in this rural area, the percentage who are sterilized is substantially lower than national averages.

The majority of respondents (59%) lived in the country. Furthermore, participants who lived in the country owned a majority of the pets, 84.6% of the cats and 76.5% of the dogs, but they were less likely to have all of their pets altered. Thus, targeting individuals who live in the county and educating them on some of the benefits of sterilizing a pet, as discussed below, may produce the biggest impact on controlling pet overpopulation.

We found that the most frequent reason for sterilizing a pet, for people who alter their pets, was a desire to control pet overpopulation. It certainly appears as though there are a lot of people who are aware of having too many pets and not enough homes and are being responsible pet owners, but many are not.

For those individuals who are not altering their pets, educating them on the health benefits and the overpopulation problem might get some to change behavior, given the top reason for not doing so is they "don't think it is necessary." Individuals with at least one unaltered pet were asked how likely they were to spay or neutered their pet under certain conditions. The most highly endorsed condition was, "if there are health benefits, including less chance of cancer, less wondering and therefore less chance of getting in an accident, and less injury from fighting." Interestingly, health benefits were endorsed as more likely to motivate a person to spay or neuter a pet, than if the surgery was free. This finding may suggest that pet owners think very highly of their pet and want it to live as long as possible, yet they just have not known about the benefits of spaying or neutering the animal. Educating pet owners that altered pets live longer, healthier lives (North Shore Animal League, 2017a) could possible motivate some owners to get their pets spayed or neutered, especially if it is affordable.

Economic reasons, both thinking the cost of surgery is too high and thinking they will breed their pet and sell the offspring, were cited by a sizeable percentage of individuals for not altering a pet. Having low-cost spay/neuter clinics, particularly in rural areas where there are high rates of poverty, will most likely motivated some to sterilize their pets. In addition to trying to reduce the cost of surgery, some low-cost clinics subsidize the cost of surgery with grants (PetSmart Charities, 2018), which help to reduce the cost even more. With the average perceived “affordable cost” for fixing a cat being approximately \$18, and for fixing a dog approximately \$30, subsidizing the cost of surgery may be necessary to motivate some pet owners.

Particularly in rural areas with high rates of poverty, some people seem to believe they can benefit economically by breeding pets and selling the offspring. Educating the public on the cost of raising a litter, especially if not all of the offspring are sold, along with educating people on the high rates of purebred dogs that are relinquished to animal shelters, may help to reduce the number of people who breed pets (Riesen, 2007). Unfortunately, it may be difficult to change behavior when people believe they can profit.

Limitations

Whenever a survey is conducted, the validity is based on the respondents’ honesty in answering questions. Because there is a certain awareness that having an altered pet is a more prosocial behavior, some people may not have been completely straightforward.

Although households that only had a cell phone were not included in the sample, using landlines was the only practical way to obtain a sample from the specified counties. The CDC (Blumberg & Luke, 2011) estimates that less than 30% of people had only cell phones at the time the survey was conducted. Furthermore, ownership of

cell phones tend to be less in people living in rural areas and those who are lower income (Pew Research Center, 2017).

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Table 1.
Reasons for Altering a Cat or Dog

Reason for Altering Cat or Dog (n=162)	Percentage—% (Could indicate more than 1 reason)
Want to control pet overpopulation	76.5
Want to avoid the cost of a litter	36.4
Want to keep pet from wandering	32.1
Want to eliminate/reduce aggression/fighting	23.5
Health Reasons-believe pet will live longer	21.0
Already spayed/neutered when obtained pet	17.3
Wanted to stop cat from spraying	16.0
Other	17.2

Table 2.
Reasons for Not Altering a Cat or Dog

Reason for Not Altering Cat or Dog (n=96)	Percentage—% (Could indicate more than 1 reason)
Don't think it's necessary	36.5
Cost is too high	30.2
He's a male and therefore can't have a litter	27.1
Intend to breed pet and sell the puppies/kittens	26.1
Pet is too young	19.8
It's just not convenient	18.8
It's a stray, it's not really my pet	16.7
I have too many animals to pay for them all	15.6
Think it will change pet's personality	12.5
He's male—don't want to change his appearance	11.5
Intend to breed and give away puppies/kittens	8.3
Want to have a litter of puppies/kittens	8.3
Can't catch it—barn or feral cat	4.2
Afraid something bad will happen during surgery	3.1
Want the kids to see the “miracle of birth”	2.1
Believe female animals need to have a litter before spaying	2.1
Other	16.7

Table 3.
How Likely to Spay or Neuter Cat or Dog if Various Conditions Met

Condition	Mean*	SD
If price is affordable cat (n=43)	5.14	2.54
If price is affordable dog (n=70)	4.37	2.51
If surgery is free (n=94)	5.24	2.40
If there are health benefits—less chance of cancer, less chance of an accident, less chance of injury from fighting (n=94)	5.55	1.88

*Scale: 1=not at all likely to 7=very likely

Building An Online Collaboration Toolkit

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Abstract

This paper reports on the findings of a case study in four Adult and Career Education project management courses where collaboration tools were used to enhance online education. Today, technology, globalization, and the need for fast responses to marketplace demands have dramatically changed the way courses are delivered. Many students may be physically separated and required to work together effectively without having ever met each other face-to-face. The new test facing instructors is how to get these virtual team members to work well together across geographic, cultural, and organizational boundaries and deliver results quickly, effectively, and consistently.

This study includes a brief literature review of collaborative tools, various tools suggested for virtual teams, the process used for the case study, and feedback from the students in the course. Lessons learned as recommendations for future implementation will also be included.

Literature Review

In a study published by the Academy of Management Executive, the authors describe a virtual team as a "group of people who work independently with shared purpose across space, time, and organization boundaries, using technology to communicate and collaborate." As such, virtual teams allow organizations to bring together people with the best expertise, regardless of where they live. Many factors affect group work, such as types of tasks, technology, group size, and individual accountability (Hathorn & Ingram, 2002). Roberts and McInnerney (2007) identified some major problems in online group learning, including students' resistance to the idea of group work and their lack of skills for group work. If done correctly, however, online group work can help optimize student learning. MacNeill et al. (2014) emphasized that online group work can provide learners with a much deeper and richer experience and is a good opportunity for learners to develop high-order thinking skills and learn how to deal with complex and abstract tasks. The key issues in the virtual team literature that will be discussed in this study are communication and technology.

In a literature review of virtual team research, Powell et al. (2004) found that virtual team success were linked to team-building exercises, establishment of shared norms, and the specification of a clear team structure. According to the review, relationship building, perceived team cohesiveness and the level of trust are other factors that impact on the level of satisfaction with working within virtual teams.

Communication is a very important factor in virtual team effectiveness, according to Horwitz et al. (2006) and Kayworth and Leidner (2000). Communication is how people develop relationships and how they work together. Online communication has been found to be less friendly and more impersonal than face to face, although it can also be more task-focused. Furthermore, asynchronous forms of communication such as email can escalate conflict because of the lack of visual and audio clues to help interpret the words used. People in a virtual team may feel less of a sense of identity with their team or organization and hence be more critical of fellow team members (Brake, 2006). The reduced sense of team identity, sometimes combined with anonymity in some online environments, may lead people to voice their dissent more strongly than they would in a face-to-face situation (Andres, 2006).

For the purpose of this study, collaboration is defined as the ability to collaborate with others by demonstrating the ability to work effectively and respectfully with diverse teams to achieve a goal. A

collaboration tool is a technology tool that can be used to help people work together to achieve a common goal.

Virtual teams rely on a variety of technologies to perform collaborative work. These technologies help team members' exchange and manage data. There is a range of collaboration tools available to teams (e.g., Blackboard Collaborate), document sharing (e.g., SharePoint, Drop box), document cocreation (e.g., Google Docs), and project management tools (e.g., Microsoft Project, Basecamp). With today's technology, it is thought that collaborative group projects can now be done easily. However, the use of online collaboration carries its own challenges, and it is important that instructors are aware of those when planning online collaboration projects.

The greatest challenges involved in the use of online tools for collaboration are the diversity of technology and distance of the group members. Some may be part-time students who work full-time and some may be in time zones as much as five or six hours apart. Arranging a mutually available time for the group members to speak in person can be difficult.

Methodology

Study Participants

The participants in this study consisted of 53 undergraduate students enrolled in a three-credit hour course in Project Management either Spring 2016 or Fall 2016. Students were from different majors that included Human Capital Performance, Workforce Development, Office Administrative Technology, and Organizational Leadership. Students enrolled in the course because it was required or because it could be used as an elective.

Course Description and Team Format

The course used for this study was an undergraduate adult and career education course in project management. Researcher and the instructor of the courses were the same person.

Given that many of these distance learners may reside across the globe and study in different time zones, the online learning approach adopted in the curriculum was aimed to provide maximum flexibility. Hai-Jew (2010) discusses the use of technology to enhance student interactivity and to provide an improved student learning experience. Active participation in asynchronous learning tasks using online discussion forums and synchronous whole-class sessions was an expectation for all students in the course. Learning tasks were designed to support student interactivity by integrating a variety of technologies. Regular contributions to Blackboard discussion forums were required throughout each week of the course. The technologies used to support an online scholarly community, student collaboration, and peer review are shown in Chart 1. However, the list does not include additional technologies selected and used by students during the course.

Chart 1. *Technologies used to promote student interactivity*

Google Docs was used to create shared student documents which provided an efficient manner to collectively gather information from students and also to model how shared documents function. In addition, each team created a presentation and an e-Book in Google Slides.

The virtual team environment was created through the Blackboard online learning portal. The Blackboard environment was created specifically to allow online team members to work collaboratively on their virtual team assignments. As part of the course, teams used BlazeView (Brightspace by D2L) the university's learning management system that allowed them to use private group discussion areas, chat areas, email, and other collaboration tools. Having a shared common space is essential for virtual teams (Ubell, 2010).

Group Me, group messaging app that is a free and simple way to stay in touch with the group. GroupMe is mobile friendly and easy to use on the go. Communicating with people on all types of devices simultaneously is easy, and when groups are no longer relevant, team members can choose to turn off notifications for that specific group. It also has a feature to share photos, videos and calendar events.

From the instructor's perspective, monitoring each group's work can help the students stay on track. Brindley et al. (2009) suggested that instructors provide clear and transparent learning goals, group task, timelines, and explicit expectations in the course syllabus to ensure that group work tasks are achievable and properly scheduled. Monitoring the process of group activities and providing timely

feedback on learning content and tasks and participation can also help students build good relationships (Coll, Rochera, deGispert, & Diaz-Barriga, 2013).

Findings

Students' responses indicated the following tools were useful in communicating with each other: Blackboard Collaborate (88.5%), Email (96%), Google Docs (86.3%), and Group Me (80.4%).

Chart 2. What means did you use to communicate with each other?

Following are some of the comments participants made regarding the tools used in the course.

Working with a team environment has its advantages and its challenges, but the overall advantages outweigh the disadvantages. The technology, such as blackboard and Google docs, has made meeting online almost identical to meeting in person face-to-face. The advantage of time saved not having to travel to meet in person is unmatched. We have faced disadvantages due to scheduling conflicts and technological difficulties, but the differing schedules can't be to blame considering that meeting virtually is actually more convenient. Sometimes one can feel working with a group can hinder their progress while others enjoy being the beneficiary of work being done for them. Either way, working with a virtual team is a good experience to train one for the real world work environment.

By far, this has been the most thought-provoking class I've taken at VSU. Using class interaction via the blackboard virtual learning environment was a solution to not being face-to-face which was engaging and informative. I felt I learned so much more by hearing many different approaches to problem solving than just being taught the generally accepted, "best" way.

Discussion

Overall the survey results showed that students enjoyed the experience of working in virtual teams. This study points to a number of critical issues about using virtual teams in online learning and raises questions for further study. Although teamwork and online teamwork are essential skills for graduates, the impact on student workloads can be excessive if the work is not monitored or scheduled appropriately.. As the teacher's role shifts from being an instructor of knowledge to a facilitator, the teacher needs to be more accessible to students and this will usually require a contribution of added time (Fahraeus et. al, 1999). Frankola (2001) suggests that motivation, realistic expectations, highly integrated live sessions, and application of advanced technologies contribute to persistence in both the academic and corporate distance-learning environment.

Lomas, et. al, 2008 study found the following:

New collaboration tools and associated best practices are emerging almost daily. While users may feel frustrated with their ability to keep up with the very latest, this frustration may be misplaced. Instead, instructors might focus on the process of integrating a new tool for collaboration:

Think twice before discarding a tool that works.

In general, the tool that students know how to use and feel comfortable with and that is the first one they reach for is probably the tool to use.

Any new tool should introduce new capabilities over the tool it replaces.

A tool should respect user time and reflect the values of the user.

Students will use technology in natural ways that allow them to do what they want in the time and space that meets their needs.

Conclusion

This study highlighted that learning and participating in a virtual team environment is a valued part of the student experience. Though these student projects were conducted in a virtual environment, students confirmed communication, accountability, and schedules were more important than technical concerns. While somewhat reassuring, this reinforces the instructor's responsibility to actively engage with and orient students when assigning project work in online classes. Cognitive engagement in online

courses is highest when students feel a personal connection with their instructor and course content. Faculty must develop instructional skills that work best in the online environment so that students are engaged and connected with the instructor and their peers.

Further research should take into account variables such as:

- interactions with course interfaces
- course design and organization
- faculty characteristics and instructor expectations
- ongoing assessment linked to immediate feedback
- creating a sense of community
- students' motivation
- leadership styles

All are qualities that could contribute positively to the effectiveness of online learning. Dykman and Davis (2008) wrote "Teaching online is an exercise in continual incremental improvements." We need to explore what new and wonderful types of learning environments make learning effective for both online and face-to-face students.

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Chart 1. Technologies used to promote student interactivity

<i>Tool</i>	<i>Purpose</i>
Google Docs, Slides, Drive	Small group meetings, file transfer, application sharing
Blackboard Collaborate	Primary online site for the course; discussion forums, virtual classroom
GroupMe	Messaging app that lets users send direct messages and group messages from mobile devices without message limits or fees.
Slack	Brings team communication and collaboration into one place
Google Hangouts	Video or voice calls with a group
Mindmeister	A powerful mind-mapping tool, but also has the functionality of many collaboration tools, so students can use it to craft ideas and concepts.

Chart 2. What means did you use to communicate with each other?

