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# Table of Contents

**Global Curriculum under Neoliberal Constraints: A Case Study**  
*Mark Beeman, Northern Arizona University*  
1

**The Law and Charging of Officer Yanez in the Officer-Initiated Shooting of Philando Castile: Perspective, Opinion, and Commentary**  
*Sue Burum, Minnesota State University, Mankato*  
10

**The Legacy of the Social Sciences: The Decline of the Liberal Arts and the Ascent of Pre-Professional Programs**  
*Kevin L. Dooley, Monmouth University*  
24

**The Orphan Train Movement**  
*David H. Karell, National University*  
32

**Are LOW Socio-Economic Students Being SET-UP for Failure?**  
*Teresa LeSage-Clements, Barba A. Patton, University of Houston-Victoria*  
37

**Progress in Self-Efficacy for Female Engineering Students**  
*Krista L. Nelson, Grambling State University*  
*Janelle R. McDaniel, University of Louisiana at Monroe*  
44

**Departmental Major Program Assessment: Essential Ingredients of the Recipe in a Small Department**  
*Kimberly M. Richburg, Lander University*  
56

**The Airport Project: Art-Based Service-Learning in the Social Studies**  
*Julie Anne Taylor, University of Michigan-Dearborn*  
*Quan Neloms, Douglass Academy for Young Men*  
*Terry Strauss, Douglass Academy for Young Men (retired)*  
63

**Air Pollution and Reproductive Health in Developing Countries**  
*FangHsun Wei, Kutztown University of Pennsylvania*  
*Vijayan K Pillai, University of Texas at Arlington*  
75

**Virtual Teams: A Case Study in Adult and Career Education**  
*Diane Wright, Valdosta State University*  
84
Global Curriculum under Neoliberal Constraints: A Case Study

Mark Beeman
Northern Arizona University

Introduction
Academics have created a rich critical literature on neoliberalism and its ramifications for public education in the United States, but there are some important limitations to the existing literature. First, the literature critically examining consequences for education in neoliberal policies in the United States mainly focuses on K-12 education. This makes sense because federal government developed mandatory policies with specific targets for K-12 schools that require periodic testing and funding stipulations. Hence, accessible data allow researchers to evaluate the effectiveness of the government regulations for improving schools in this relatively limited context. Public universities do not come under the same mandatory policy regulations as K-12 schools. At the university level neoliberal guidelines are not federally mandated, and attempts to implement neoliberal interventions vary from state to state. Hence, the types of data available for assessing directed neoliberal policies at the K-12 level are not available the university level. Second, the limited literature examining neoliberalism in higher education in the United States generally focuses on the large-scale effects of neoliberal policies measured university-wide. Significant budget cuts, tenure track density, increased tuitions for students, and program cuts at state universities are reflected in the literature. For this study, these large-scale effects are a point of departure to identify the structural context in which curriculum development (or lack of development) actually takes place.

This study examines the implementation of a global curriculum at a public state university in Arizona. The present study will add to the literature in two significant ways. First, it brings needed attention to the role of neoliberalism in education in the United States at the university level. Second, it goes beyond describing how the university responds to neoliberal constraints at the macro level by examining actual curriculum development.

Literature Review
Historically public education in the United States has been viewed as a public good. Beginning in 1787 Thomas Jefferson advocated educating children through public funded schools to ensure that citizens (originally free white males) were educated to be better workers and citizens, with compulsory education laws following in the 1800s. No clear educational philosophy dominated education throughout the nineteenth and twentieth centuries, but public vocational, democratic and academic education included a mixture of approaches ranging from Taylor's scientific management to Dewey's progressive approach (McGill 2015).

The notion of publicly funded education as a public good was challenged in the second half of the twentieth century driven by neoliberal philosophy. General neoliberal principles have been summarized as 1) "the rule of the market," 2) "cutting public expenditure for social services," 3) "deregulation," 4) "privatization," and 5) "eliminating the concept of 'the public good' or 'community'" (Martinez and Garcia 2016). According to Harvey (2012) neoliberalism has resulted in globalization, loss of labor benefits, austerity, and increased inequality. In 1962 Milton Friedman made the argument that market principles of competition should be applied to
education, whereby private and public schools compete for K-12 students, and that government vouchers could produce competition between public and private institutions of higher learning (Friedman 2002). In 1989 corporate leaders developed a policy recommendation based on market competition, testing, and punishments and rewards for school performance, and by 2000 sixteen states adopted those principles (McGill 2015).

During this period the Governors of Florida (Jeb Bush) and Texas (George W. Bush) adopted this corporate model of education. Jeb Bush became a strong political advocate for "Common Core" policies, which effectively took much educational decision-making from teachers and communities, but benefited major corporations that provide curriculum and testing services (emails 2013; Layton 2013). George W. Bush claimed a "Texas miracle" from his educational policies as governor, and later as President of the United States used this corporate model as a basis to transform federal educational policy through the No Child Left Behind Act. While congress managed to defeat the voucher provision in the legislation, No Child Left Behind (NCLB) demanded testing and standards that ultimately proved to be unreasonable, promoted charter school education which diverted funds from public schools, allowed for poorly performing schools to be taken over and turned into charter schools, and paved the way for private companies to profit from the tutoring services mandated for low performing schools (Hurst 2011; Lipman 2007; McGill 2015; NCLB 2004).

Ironically, the highly touted "successes" of the Florida Program and the "Texas Miracle" were in fact not successful, rather they turned our to be based on manipulated data, raising charges of fraud (Shapiro 2013). The goals of NCLB resulted in even well performing schools being labeled as failures until the core targets of the testing/assessment plan were eliminated by the Obama Administration (Shapiro 2013). Nonetheless, despite research indicating privatizing education undermines democratic decision-making and does not generally improve the quality of education, the underlying corporate model of vastly expanding charter schools and privatizing education had become firmly established (Hatch 2015; Lempke 2015; Hursh 2011).

The public university's ability to deliver quality education has been significantly challenged by neoliberal interventions as well. Here though, unlike the k-12 experience, there is no equivalent to a NCLB policy to mandate changes. Public universities are state universities in the United States. Historically, each of the fifty states had control over both the major source of funding (through the state legislature) and governance decision-making (through the state's board of regents) of its respective state university system. Some states have elected regents, but in most states regents are appointed by the state legislature or by the state governor (Lowry 2009).

The neoliberal influence on higher education is reflected in changes for state funding for universities. Historically states invested heavily in their universities, keeping student tuitions low or even free (Vega 2014). But from the 1970s to 2012 average state funding for the cost of university education fell from 75% to 23% (Douglas-Gabrielle 2015). Consistent with a market approach, higher education has witnessed a significant increase in student tuition and more emphasis on corporate partnerships in higher education (Wood 2014; Woodhouse 2015). In some cases donors committed to neoliberal policies have directly sought to influence curriculum decisions at universities (Melehy 2012; Levinthal 2015).

Under privatization constraints and the weakening commitment to public education some university educators have asked if world-class public universities are still viable (Ikenberry 2009). Data indicates universities have responded by significantly reducing tenure track faculty, increasing their reliance on part-time and non-tenure track faculty, and eliminating programs to cut costs (AAUP 2013; Dunn and Faison 2015). At least one study suggests that programs
committed to globalization rhetoric (such as global studies courses) are more likely to be supported at the university level while courses focusing on inequality and social justice are more likely to be cut (Dunn and Faison 2015). The current study will contribute to this literature by examining the process by which curriculum decisions concerning global education actually are affected by neoliberal constraints.

The Case

This case study focuses on a global curriculum program at one academic department at a state university in the United States. This study is guided by the sociological imagination approach developed by Mills, which provides a framework for examining public issues at the intersection of their historical and structural contexts (Mills 2000). Relevant sources of information for this case include primary documents (university and state documents), secondary documents, and information available at university meetings.

The examination focuses on a public university in the state of Arizona. The actual names of the university and the department in this study are not used. The university will be referred to only as "State University" or SU. The department is in the social sciences field, and will be referred to as the Department of Social Sciences or DSS.

State University currently enrolls over twenty thousand students. In addition to being a Ph.D. granting institution, it historically took pride in its commitment to teaching undergraduates and liberal arts education. Like many campuses, State University was publicly committed to ensuring the institution was a "global campus." At the center of global education is the curriculum. Traditionally, global education was provided by hiring faculty with expertise in global research. Student exposure to this expertise was done through required courses in majors or minors, electives, and a university required global diversity course. To qualify as a global diversity course, a proposal including a course description (indicating the majority of the course would focus on non-western societies), sample syllabi, and a list identifying qualified faculty to teach the course, required approval from a campus-wide diversity committee. This approach can be designated as the "Expertise Model."

By the fall of 2010 the university was attempting to augment global education by inviting all departments to participate in a different type of approach labeled the "Infusion Model." Here, regardless of expertise, all departments were encouraged to "infuse" some global content into existing courses. The idea was that global content may be contained in courses not primarily designed for global education. We will return to the incentives for this program later.

In accordance with the infusion model, the Department of Social Sciences (DSS) developed a global initiative plan that was approved by the department the fall of 2010 and subsequently approved by the university. We will not be concerned with all details in the plan, but only with those directly affecting the curriculum. The main goals are quoted as follows:

1. **Students will have a critical understanding of the commonalities among local and global social structures...**

2. **Students will understand how socio-historical forces influence contemporary societies especially as this relates to issues of power, inequality, racial and ethnic relations and stratification.**

3. **Students will understand how race and ethnicity plays itself out in terms of population movements, border crossings, and the formations of diasporas...**

4. **Students will have knowledge of how individual and societal experiences vary by gender, family structure, social class, race, ethnicity and culture, and age—both locally and in societies around the world.**
5. Students will understand sustainability in terms of social, economic, and ecological dimensions and how diverse social groups are differentially situated in relation to, or impacted by, the environment (GLI 2010)

As part of the plan, the department was required to demonstrate specifically how the curriculum would be assessed to achieve the above goals. In the case of DSS it was felt that developing new courses were not required. DSS has five required core courses: Introduction, Theory, Methods, Statistics, and the Capstone. All other courses to complete the major are elected by the students from a host of social science topics.

The plan to assess the global initiative focused on three courses all DSS majors were required to take: Introduction, Theory, and the Capstone. The proposal explained "While not every outcome can be covered in each class, we feel confident that all stated objectives will be met by the time students complete all their core classes" (GLI 2010). Again, rather than design courses that focus on global education, the idea was that enough global content had been infused in the core courses to give students significant global education.

The task at hand is to assess how well the program demonstrates a commitment of excellence to global learning by examining each of the five required core courses for global content. For this study, commitment to global content will be assessed by examining four criteria for each course.

1) Does the course qualify for the university’s campus wide global diversity requirement (GDR)? This is the highest global indicator on campus for course work developed by faculty. The course must establish its major focus is non-western global content. All students on campus must complete at least one GDR course.

2) Does the course qualify for the Global Learning Initiative’s list of courses with "significant global content" (SGC)? This list was an administration initiative to demonstrate the university's broad selection of courses with some global content. No operational definition for “significant” was established for this list. This list is less rigorous in global content the GDR courses, as many SGC courses do not qualify for GDR status.

3) Is there a reference to global or international content in the course description (CD)? The course description sets the required parameters to be covered in a course, regardless of the instructor.

4) What is the extent of actual global content for each course according to the course syllabus? This was determined by examining course descriptions and course syllabi for the recently offered core courses.

Table 1 shows that of the five courses selected to meet the department's global objectives none contain sufficient global content to qualify for the university's faculty approved global diversity requirement. Additionally, none of the courses qualify for the less rigorous significant global content list created by the administration initiative. None of the courses have a global or international focus as part of its official catalog description. Four of the five courses on the list actually require no global focus. Fall 2015 course syllabi indicate that the Introduction course generally covers a global component for two weeks out of fifteen. The capstone is taught to the instructor's strengths, and requires no global component. Incorporating global content is left to the instructor's discretion. The Theory course regularly is taught by two of the faculty and DSS. One has no global component listed in the syllabus. The other has one chapter assigned during
the course that focuses on globalization. Thus it appears quite possible that a student could take all of the core courses, and be exposed to no more than two weeks of global instruction in just one course.

Additional Considerations

A second part of the global plan included additional courses "students will be advised to enroll in" to strengthen various aspects of global education. Seven courses are listed. Upon implementation of the global program, DSS offered one course that specifically focused on globalization. Unfortunately the globalization course was neither included as an assessment course, nor was it included on the recommended advisement list for the global program.

Finally, not part of the global program, but a related development was that during the same year the program was approved, DSS also made the decision to drop its Bachelor of Arts degree. The Bachelor of Science degree was maintained. The Bachelor of Arts degree required international language training and would seem to have been beneficial to the DSS's global educational focus. The Bachelor of Science degree has no such requirement.

Overall, it appears that while the initiative to articulate a global program within the department of DSS is a significant educational goal, the program itself shows some serious weaknesses. How does one explain global program with such low required global content? Why drop the international language requirement degree while promoting global education? A closer look at the institutional context is informative in this case.

A Sociological Explanation

C. Wright Mills (2000) noted that social problems should be examined as public issues, which is to say that they cannot be properly understood outside their structural and historical contexts. Concerning the structural context, the state of Arizona for years has had a conservative dominated legislature. Following neoliberal market principles, the legislature repeatedly had been in favor of budget cuts for education, but former Governor Janet Napolitano used the line item veto against the cuts (Ghioto 2003; McClory 2010). By 2009 Napolitano vacated the office for a federal appointment, leaving a conservative, Jan Brewer, to step in as the new governor (Azcentral 2009). Governor Brewer not only supported significant cuts to higher education, but during her terms appointed six of the eight non-student members to the state's university board of regents (Rau 2016), The new governor also entered office during the economic collapse of the housing market.

From 2008 to 2014 State University's student population rose by 25 per cent. At the same time the state cut the higher education budget by 48 per cent. Consistent with neoliberal philosophy, much of the costs were passed on to the students, whose tuition rose by 80 per cent (Hendley 2014). Also in line with the neoliberal philosophy on education, the board of regents shifted funding to the state universities from enrollment funding (based on the number students who enroll) to performance funding (based on the number students who complete degrees).

[See Table 2]

The upper administration at State University now expected the faculty to "do more with less." In reality, this meant following a model of investing more in administration and technology, and less investment in non-administrative employees. During this period State University's upper administrative positions grew by thirty-six percent. At the same time, tenure track and tenured faculty positions significantly declined, full-time non-tenure track positions increased by one hundred thirty-eight per cent, and the instructional budget dropped by nine per cent (see Table 2).
The administration informed the faculty that board of regents was focused on program efficiency. In this context, programs graduating few students were targeted for elimination. One of the university's Ph.D. programs was cut during this period despite the objections of the departmental faculty. Consistent with pressure to make programs more "efficient," the DSS elected to eliminate its B.A. degree and retain its B.S. degree. At that time more students in DSS had signed up for the B.S. degree than the B.A. degree. There was also a perception that some students view the B.A. degree as more difficult since it required international language training. The B.S. required no international language education. Thus if the department kept only one degree, the B.S. appeared to be the more likely option to attract students. One of the largest departments on campus had already cut the B.A. option, setting the standard for curriculum streamlining. In addition, at a time when the administration was attempting to strengthen its STEMS programs, focusing on the B.S. degree may have given the impression of greater emphasis on science than liberal arts.

The reality was somewhat different. Cutting the B.A. in DSS created no savings. The courses for both the B.A. and the B.S. were the same. The students for both degrees enrolled in the same DSS classes taught by the same professors. The only difference was that B.S. students were not required to take courses from the language departments. Also, impressions notwithstanding, the B.S. degree required no more science than the B.A. degree. Of course, many of the DDS faculty realized no real savings would be realized by cutting the B.A. degree, but the knowledge that the board of regents and the administration expected departments to cut smaller programs prevailed for this decision.

Similarly, the decision to develop the infusion model of global education was not a department initiative. Coinciding with the university's drive to attract more revenue by developing international partnership programs, the infusion model was initiated by the vice provost's office overseeing global education with the cooperation of a selected faculty committee. At a time when the university was adapting to massive budget cuts, the vice provost was offering $4000 per faculty, up to $12,000 per department, to develop the infusion plan (IGLR 2010).

It was within this context that the DSS developed its global learning initiative. The benefits were apparent. The DSS was viewed as being supportive of the administrative-led initiative, and three of the faculty received significant compensation in an otherwise stingy budget environment. Outside of the compensated work of the faculty who wrote the plan, there was no significant additional work for the faculty. The DSS neither developed new courses nor were the faculty teaching the assessment courses required to make significant changes. To the outside reviewers, the plan appears to reflect a commitment to a new university global initiative. As we saw in Table 2, it is only when each of the courses designated for assessment is critically examined does one realize there is very little global education required here.

For the administration, a major advantage of the infusion model is that outside the modest one-time stipends giving to the faculty outlining the plan, it cost little or nothing to implement. It allows for infusing global content in courses that already exist using the faculty already teaching them. Hiring faculty with global expertise to teach new courses was not required.

An alternative path for the university to strengthen its global curriculum could have been to expand the existing expertise model. For example, students could be required to take more courses from the global diversity requirement and departments could receive more resources to develop additional global courses. Strengthening the expertise approach requires that the university increase its investment significantly by hiring more faculty trained in globally focused fields. Under neoliberal financial constraints, the educational benefits of expanding the expertise
approach apparently appeared too costly. Rather than seriously considering the merits of expanding the expertise approach, its contribution to global education was minimized in the infusion model document (Task Force 2010).

Returning to the DSS, there is still the question as to why was the globalization course was left out of the assessment process. In part, there may have been some oversight involved, but there is also logic to the decision, and it too involved costs. DSS had developed its globalization course several years before the infusion model was introduced on campus. Before the budget crisis DSS had hired a tenure track faculty trained in globalization to teach the course and to expand the global component of the program. Unfortunately for DSS, after a few years this faculty member accepted a position at another university. A request was made to replace this important tenure track line, but with the slashed budget at State University, the request was denied. Although the globalization course was still listed in the department program, there was no tenured or tenure-track faculty available to teach it regularly. Using the global proposal as a platform to renew the request for the tenure-track global hire was rejected on the grounds that it would politicize the proposal. Hence, the departmental global proposal was submitted without its only globalization course being listed as either a recommended course or a course to be assessed.

**Conclusion**

The purpose of this study was to examine what impact neoliberalism might have on global curriculum decisions at a public university in the United States using the case study method. We found that neoliberal constraints were, in effect, originated at the state legislative budget level then filtered through the regents and the university administration to the faculty. At the same time the university was actively promoting global commitment to education, it was cutting resources across the curriculum.

This case study examined a departmental global program that was approved as part of a university-wide global initiative. We uncovered significant weaknesses in the program. A critical examination found that there was actually very little required global content in the program's designated assessment courses. Indeed, some of the courses had no global content. We also noted that the department's one course which focused specifically on global content had been omitted from global assessment plan. Finally, we found that the department did away with its only language requirements during the same semester it was devising its plan to better educate students as global citizens. Each of these decisions can be traced back to pressure from the administration to delivery educational programs in an environment where resources to the university were significantly reduced. In essence, faculty members were struggling to do more with less.

In the spirit of education as a public good, the framers of the Arizona constitution instructed that public education be "as nearly free as possible" (Article 11 2007). Over time the state has moved away from that philosophy. Universities are required to adjust to significant budget cuts and search for new sources of funding. As we have seen, one way to decrease costs while developing global programming is to move away from hiring additional faculty with high levels of expertise in global research and curriculum development. This model encourages non-experts to infuse global content into their existing courses. In the case examined, we found that significant problems have accompanied that strategy. More research in this area is needed to determine if the types of curricular problems outlined in this case are characteristic of a broader pattern in higher education.
References

[accessed October 10, 2014]


wornin.html [accessed October 14, 2015]


Factbooks 2007-14 (documents available upon request)


Jan 14, 2003


Task Force 2010 (report available upon request)


Table 1: Global Content in Core Courses

<table>
<thead>
<tr>
<th>Course Type</th>
<th>GDR</th>
<th>SGC</th>
<th>CD</th>
<th>Course Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Intro.</em></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>generally 2 out of 15 weeks have global topics</td>
</tr>
<tr>
<td><em>Theory</em></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>no global focus required</td>
</tr>
<tr>
<td><em>Capstone</em></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>no global focus required</td>
</tr>
<tr>
<td>Statistics</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>no global focus</td>
</tr>
<tr>
<td>*courses designated for assessment of the global goals for DDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Administrative Choices by Percent Change 2007-8 to 2013-14

<table>
<thead>
<tr>
<th>Administrative Choice</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Population</td>
<td>+ 25%</td>
</tr>
<tr>
<td>Top level administration</td>
<td>+ 36%</td>
</tr>
<tr>
<td>Tenured faculty</td>
<td>- 13%</td>
</tr>
<tr>
<td>Tenure-track faculty</td>
<td>- 38%</td>
</tr>
<tr>
<td>Full-time Non-TT</td>
<td>+138%</td>
</tr>
<tr>
<td>Instructional Budget</td>
<td>- 9%</td>
</tr>
</tbody>
</table>

(Calculated from Factbooks 2007-2014)
The Law and Charging of Officer Yanez in the Officer-Initiated Shooting of Philando Castile: Perspective, Opinion, and Commentary.

Professor Sue Burum
Minnesota State University, Mankato

Introduction
"Aaron shall bring the goat whose lot falls to the LORD and sacrifice it for a sin offering. But the goat chosen by lot as the scapegoat shall be presented alive before the LORD to be used for making atonement by sending it into the wilderness as a scapegoat."


Scapegoating is deeply rooted in Western and Ancient Near Eastern cultures. Traditionally, the act of casting away an innocent animal (i.e., a goat) symbolized an individual or community casting away the burden of sin, thus making the act an atonement ritual. When performed in this manner and context, scapegoating was seen to be a good, beneficial thing. In more recent times, scapegoating has adopted a different connotation. Presently, scapegoating is understood to be the offering of a patsy to assume blame on behalf of others. The patsy—or scapegoat—may or may not have played a part in the offending actions, but the key point is that blame is being assumed by the patsy on behalf of others. This modern form of scapegoating can take two forms, depending upon whom is offering the patsy. If the patsy is being offered by guilty parties, then the act of scapegoating becomes a method of escaping punishment—directly contradicting the traditional act of atonement. Alternatively, a patsy can be offered by the victims of the offending actions to seek a feeling of justice or retribution (Dictionary, 2016). The problems with this second form of modern scapegoating are 1) their blatant circumvention of legal standards, and 2) the promotion of "mob justice" mentality. It is this latter case—a patsy being offered by the victims—that is of interest to this author in this article.

A potential bias warning is in order. This writer is trying to review the complaint that is charging an officer with three felony crimes, review the applicable law, and assess the strong and weak parts of the prosecutor and defense counsel’s positions with the information that is available to the public. There are many things like the Minnesota Bureau of Criminal Apprehension’s (BCA) report on the investigation and the dash cam video that will not be released to the public until after the trial. However, like everything else in society, a certain world view is always brought to these situations. This writer teaches at Minnesota State University, Mankato. This is the same school from which the two officers in the case graduated. This writer did not have either of these two officers as students, but this writer has spent over 30 years teaching potential police officers. This writer has studied police officer shooting decisions and how quickly such decisions must be made. The focus of this paper will be based on what was reported in the media from November 2016 through January 2017 but the analysis is influenced by years of law enforcement teaching and study.

BCA Established Facts

According to the Minnesota BCA (Ramsey, 2016), a Super USA convenience store was robbed on July 2, 2016. Saint Anthony Police Officer Jeronimo Yanez was one of the responding officers. On the store’s surveillance video, Yanez saw two Black male suspects both with dreadlocks, glasses, baseball caps, and firearms. While on patrol July 6, 2016, Yanez saw a vehicle, which was driven by Philando
Castile, in the area of the convenience store. Castile was a Black male who wore glasses and had dreadlocks. Yanez radioed fellow Saint Anthony Police Officer Joseph Kauser, who was on patrol in the area, that he was going to pull over a vehicle that had a driver that looked like the convenience store robbery suspect, the driver had a “wide set nose” like the suspect involved in the robbery, and the vehicle had a non-working brake light. Yanez followed the vehicle until fellow officer Kauser arrived as back-up. In the front passenger seat of the car Castile was driving was Lavish “Diamond” Reynolds, Castile’s girlfriend. In the back seat behind her was Reynolds’s four-year-old daughter.

When Kauser arrived, Yanez turned on his squad car’s lights and Castile pulled over. Yanez went to the driver’s side of the car and Kauser went to the passenger side. Yanez told investigators that he smelled burnt marijuana coming from the car when he approached the vehicle. Yanez informed Castile of the problem with the brake light and asked Castile for his driver’s license and proof of insurance. Castile gave Yanez his proof of insurance. Castile then informed Yanez that he had a firearm. Yanez told Castile not to reach for it. Castile said that “he was reaching”. Yanez interrupted and responded not to pull it out (Ramsey, 2016). Castile then said that he was not going to pull it out, but he continued to reach his hand toward the area of the gun, which was in a right pant pocket between Castile’s right thigh and the console between the front seats. The gun and wallet apparently were in the same location. Yanez said the car was dark and he temporarily lost sight of Castile’s right hand, that he thought was going for the gun. Yanez indicated that Castile did not appear to be following his instructions and he was looking straight ahead as they talked. Yanez said he was scared when Castile’s hand appeared to grip something larger than a wallet. At that point, Yanez fired seven shots at Castile from his gun. Reynolds began recording the incident on her cellphone after Castile was shot. The video went viral when she posted it to her Facebook page (Video, 2016).

When interviewed by the Minnesota BCA (Ramsey, 2016), Kauser indicated that he heard Yanez tell Castile not to reach for it. Kauser also saw Castile’s right hand go down and he did not know if Castile was reaching for a gun or his wallet. Castile died from multiple gunshot wounds. The toxicology report showed Castile was positive for THC at the time of his death. It is the BCA’s role to determine the facts in officer involved shootings, but not to make recommendations on guilt or innocence. The decision on whether or not to bring charges and whether or not to convene a grand jury to make the charging decision is solely at the prosecutor’s discretion.

The robbery of the Super USA convenience store remains unsolved as of January 2017. Castile was ruled out as a suspect in the case because, after his death, there was another robbery in the area. The video from the second robbery showed a suspect very similar to a suspect in the original robbery video (Ramsey 2016).

Ramsey County Attorney John Choi, based on the BCA’s investigation, decided to bring criminal charges against Yanez on November 16, 2016. Choi did not appoint a special prosecutor to investigate and make the charging decision but, instead, brought a special prosecutor onto his team to enhance trust in the results (Capecchi & Smith 1, 2016). He named former U.S. Department of Justice attorney Don Lewis to the role. Lewis is a Black attorney who went to Harvard Law School. He worked on civil rights cases in the South and then returned to Minneapolis and worked for around 7 years as a federal prosecutor. He is also a former Hamline Law School dean. He helped investigate allegations of excessive force in the arrest of a Black community activist in 2014 in Minneapolis. In that case, Lewis concluded the officers were justified in the amount of force they used (Capecchi & Smith 1, 2016). Doug Henning, Special Agent at the BCA, was listed as the complainant. He used Jeffery J. Noble, an expert on police procedure, who was retained by Choi’s office, in the complaint. Noble concluded, considering a totality of the circumstances in the case, that the shooting was unnecessary, unreasonable, and inconsistent with established police practices. Yanez currently faces second-degree manslaughter charges in the death of Castile. He also faces two counts of intentionally discharging a firearm that endangered the safety of another person because Reynolds and her daughter were in the car when he discharged his firearm seven times. All three charges are at the felony level. He will go to trial May 30, 2017.
Applicable Criminal and Civil Law

Criminal Law

Yanez was charged with manslaughter in the second degree in violation of the Minnesota Criminal Code section 609.205 (1) (MN Statutes 1, 2015). Under this section, a person commits manslaughter when he or she causes the death of another by “culpable negligence whereby the person creates an unreasonable risk, and consciously takes chances of causing death or great bodily harm to another”. This is involuntary manslaughter because the person’s death is caused by reckless or grossly negligent actions. There is no intent to harm the victim. Instead the perpetrator shows a disregard for the safety or risk of death of others. This is the lowest level of homicide in Minnesota. This is an interesting charge because it actually undercharges Yanez, and it does not appear to be supported by the facts. The gun did not accidentally discharge. Yanez intentionally shot Castile because he feared for his life. This writer does not know why this charge was selected, unless the prosecutors thought this was the only way to get the jury to vote to convict.

There is also a Minnesota statute that indicates how officer-involved shootings should be analyzed when an officer believed the shooting was necessary to protect the life of the officer or another. An officer who is met with resistance may have a right to use deadly force in self-defense if four rules are followed: (1) there must be a reasonable fear of death or great bodily harm for oneself or another; (2) the one claiming the defense must have entered the conflict reluctantly; (3) there must be no reasonable means of retreat; and (4) no lesser force will suffice to stop the threat (MN Statutes 2, 2015). In Minnesota, the use of deadly force by a police officer in the line of duty is justified only when necessary: (1) to protect the police officer or another from apparent death or great bodily harm; (2) to effect the arrest or capture, or prevent the escape, of a person whom the police officer knows or has reasonable grounds to believe has committed or attempted to commit a felony involving the use or threatened use of deadly force; or (3) to effect the arrest or capture, or prevent the escape, of a person whom the officer knows or has reasonable grounds to believe has committed or attempted to commit a felony if the officer reasonably believes that the person will cause death or great bodily harm if the person’s apprehension is delayed (MN Statutes 3, 2015). This statute follows the Model Penal Code approach of allowing deadly force if there is a reasonable belief that the suspect committed a felony that involved the use or threatened use of deadly force, or if there is a substantial risk that the subject would cause death or serious bodily injury if the arrest were delayed.

There are a couple of U.S. Supreme Court cases that provide assistance on how self-defense cases should be analyzed. First, in 1985, in Tennessee v. Garner, the U.S. Supreme Court held that, under the Fourth Amendment, law enforcement officers pursuing an unarmed suspect could use deadly force to prevent escape only if the officer had probable cause to believe that the suspect posed a significant threat of death or serious physical injury to the officer or others (Tennessee, 1985). Tennessee’s law, that allowed officers to use all necessary force, including deadly force, to stop a suspect who attempts to flee or resists lawful arrest, was unconstitutional. In that case, officers shot and killed a teenager who tried to flee after being ordered to stop. The teen was killed for taking a purse in a burglary containing ten dollars and a ring. The state statute was unconstitutional because it authorized the use of force on an unarmed, non-dangerous fleeing suspect. To use deadly force, the officer must be stopping a fleeing felony suspect whom the officer has probable cause to believe poses a significant threat of death of serious bodily harm to the officer or others. The use of deadly force in violation of this rule can give rise to a civil cause of action for damages under section 1983 of the Civil Rights Act of 1871 (Civil Rights Act, 1871). This does not, however, mean that the use of deadly force is automatically a crime. States may absolve the police officer of criminal liability for the use of deadly force if the officer had reason to believe that the officer’s life was in danger.

Second, in 1989, in Graham v. Connor, the Court decided that the objective standard for reasonableness would apply to judge a person’s claim that law enforcement officers used excessive force in making a seizure of a person. As long as the officer reasonably believes the deadly force is necessary for the arrest and the suspect is guilty of a felony, the officer has a defense, even if the officer’s belief turns out to be wrong. How an officer would assess the situation, not the ultimate truth of what actually
happened, controls. To judge reasonableness, the court would look to how other officers, rather than civilians, would have assessed the situation and need for deadly force in defense of the officer’s life. Reasonableness is not assessed with the clearer vision hindsight provides. Reasonableness is determined from the perspective of the police officer under the circumstances that the officer was aware of at the time of the shooting. The reason for this rule, according to the court, is because law enforcement officers are often required to act quickly in tense, uncertain, and rapidly evolving situations without the benefit of detailed investigation into the situation (Graham, 1989). While the defense rules are the same for civilians and police officers, the courts have interpreted the provisions for law enforcement in a way that sets a high bar for obtaining a criminal conviction. In order to bring charges against a police officer, the state must be able to prove, beyond a reasonable doubt, that the officer’s use of deadly force was not justified (MN Statutes 2, 2015). Whether the gun was near Castile’s wallet, and whether his hand kept moving in that direction, will be important in deciding whether the officer had a reasonable belief his life was in danger. This will be an important fact for the jury to decide when Yanez goes to trial.

There is a new case at the U.S. Supreme Court, County of Los Angeles v. Mendez (County, 2017), that could potentially change Connor. In October 2010, two deputies from the Los Angeles County Sheriff’s Department got word from an informant that a wanted parolee lived in a shed with a girlfriend on another person’s property. The deputies searched the sheds on the property and entered the one the parolee lived in. They did not have a warrant and they did not knock and announce their presence. Upon entering one of the deputies saw a silhouette of a person inside with a gun. The deputy yelled “gun.” Both deputies shot at both people inside and injured both. The two who were shot brought an action under 42 U.S.C. Section 1983 for violations of their Fourth Amendment rights. The Ninth Circuit has a provocation rule that holds an officer liable if the officer intentionally or recklessly provokes a violent confrontation. This rule is contrary to Connor as an officer could be liable even if the force used was reasonable if the officer provoked the incident (Oyez, 2017). Other states could adopt provocation rules if they believe they want more pressure on officers by making it easier to hold them accountable. The Court heard oral argument March 22, 2017, but the case has not been decided yet. The case could modify Connor, but modifications should be for future cases, not for Yanez’s case.

Yanez was also charged with the intentional discharge of a firearm that endangers the safety of another in violation of Minnesota Criminal Code section 609.661 (a) (2) (MN Statutes 4, 2015). This section makes it a felony to “recklessly discharge a firearm under circumstances that endanger the safety of another.” In State v. Engle, the Minnesota Supreme Court concluded that recklessly discharging a firearm requires proof of “a conscious or intentional act, in connection with the discharge of a firearm, that creates a substantial and unjustifiable risk that the actor is aware of and disregards” (State, 2008). Simple negligence cannot satisfy for the mental state.

Civil Law

Minnesota section 609.06 allows police officers to use reasonable force on another person, without their consent, in the following circumstances: (1) to make a lawful arrest, (2) in the execution of legal process, (3) to enforce court orders, or (4) in executing any other duty imposed upon the officer by law. The statute goes on to say that deadly force may not be used against police officers who have announced their presence and are performing official duties (MN Statutes 2, 2015).

Civil cases from the use of excessive force are typically brought under section 1983 of the Civil Rights Act of 1871 (Civil Rights Act, 1871). This statute makes it illegal for anyone acting under actual authority of the law, or the appearance of legal authority (the color of law), to deprive another person of constitutional rights. This would provide an avenue for citizens to get civil damages if a police officer discriminates against them. Police officers are usually protected against civil suits claiming the use of excessive force by officers. Police officers are given broad authority to do their jobs. They are given qualified immunity or protection from being sued when doing their jobs. If this did not exist, the fear of being sued could affect an officer’s job performance. Police officers are allowed to use reasonable force against citizens. Reasonable force is the force necessary to subdue the person under the circumstances of the incident. Officers who use more force than necessary to subdue the person may, under some circumstances, be sued. It does not matter whether the officer intended to use excessive force. What
decides whether something is unreasonable force is whether the force would be excessive in the particular case according to other officers.

The US Supreme Court has analyzed whether police officers may also have some protection from civil suits. The U.S. Supreme Court, in *Bivens v. Six Unknown Named Agents*, concluded that police officers have qualified immunity, a protective doctrine, that shields government officials from civil liability unless their actions would be found to violate an individual’s federal constitutional rights (Bivens, 1971). It allows public officials to be accountable when they exercise power in an illegal manner, but it also protects public officials from frivolous lawsuits. In the case, Federal Bureau of Narcotics agents searched the house of Webster Bivens without a warrant and arrested him for drugs. Drug charges were filed but later dismissed. Bivens filed a lawsuit alleging his Fourth Amendment freedom from unreasonable search and seizure was violated. The federal government argued that his only course of action was remedies that the state provided. The Fourth Amendment does not provide for a cause of action. The Supreme Court disagreed with the government’s argument and held that a plaintiff can bring an action in federal court based solely on a violation of Fourth Amendment rights. People have a private right of action for monetary damages when their constitutional rights have been violated and no other remedy exists.

The U.S. Supreme Court, in *Saucier v. Katz* (Saucier, 2001), used a two-step process to decide if qualified immunity applies in the *Bivens* case. Qualified immunity is not just immunity from having to pay damages, it is immunity from even having to go through a trial at all (Schott, 2012). In this new two-step approach, the first step is to decide if the officer’s conduct violated the Constitution. If the officer’s conduct did not violate the Constitution, then the officer would not be liable and the case would be over. If the officer’s conduct did violate the Constitution, then the second step would be whether the right was so clearly established and generally known that a reasonable officer would know that his or her conduct was violating that right. If a reasonable officer would not know his or her conduct violated a right, then the officer would escape liability. Only if a reasonable officer would know his or her conduct violates a right, could the lawsuit continue. Qualified immunity balances two important interests – the need to hold government officials accountable and the need to shield officials from liability when they do their duties reasonably. It only applies to civil suits in which the government official is personally being sued. It does not apply to cases in which the government is being sued for an official’s actions (Schott, 2012). The two-step approach, created in the case, helps lower courts apply *Bivens* rules to particular future cases facing the courts.

**Use of Federal Courts**

There have been calls for the federal government to prosecute cases like the Castile shooting. Minnesota’s Governor Dayton did not hesitate to respond after the Castile shooting. On July 6, right after the shooting and before any investigation, Dayton commented to reporters that Castile would probably still be alive had he been White (Rupar, 2016). Dayton indicated there might have been racial profiling. Dayton asked for a federal investigation, which may sound tough, but officers are more likely to be charged with violating a state law (Tevlin, 2016). There are more state laws, so there’s a higher chance of finding a law to punish Yanez under. The federal government has more limited laws with which to punish officers. A state has a full range of homicide crimes available. A state could charge anything from first degree murder to simple assault. On the other hand, federal prosecutors only investigate violations of federal law, such as whether Yanez violated Castile’s federal constitutional rights. They could not focus on whether there was poor police work, bad judgement, or whether officers acted negligently. These matters are left for the state. Federal investigators would have to prove, beyond a reasonable doubt, that the officer acted with the specific intent to violate Castile’s constitutional rights by intending to harm or kill Castile because of his race. This is very difficult to prove.

The attorney for Castile’s family, Glenda Hatchett, also called for a federal investigation. This may be because the officer could have a strong case for both stopping and shooting Castile, which would make it less likely any state action against Yanez would be successful. Hatchett also asked the U.S. Department of Justice to launch an independent investigation, saying the family believes criminal charges should be filed and that Castile was racially profiled. In the letter dated August 2, Hatchett told U.S. Attorney General Loretta Lynch that “we do not believe that local law enforcement authorities will provide a fair and
impartial review” (Associated Press 1, 2016).

Analysis of the Indictment

Pressure to Prosecute

Early comments, like those made by Dayton, possibly led people to believe that the officer should be charged with murder. Dayton also promised that the officers responsible would be brought to justice (Fox 9 News, 2016). As the Governor made a statement indicating the officer was at fault, pressure may have been on government officials, such as the prosecutors, to bring some charges against the officer whether they are warranted or not, thus creating a scapegoat. If charges are not brought or there is no conviction, it is understandable how the public could conclude government institutions and politicians are failing them, and police officers are getting away with murder if they shoot Black citizens. Dayton’s early statement could actually inflame the situation should a jury ultimately decide Yanez is not guilty. Because of these statements, community pressure was on prosecutors to bring charges. The public was outraged, and the public knows something in society is not right (Vock, 2016). It seems in the news there is constantly some shooting of an unarmed Black man by police officers. Politicians may feel that they need to react to these fears or they could face defeat in the next election. If Reynolds’s video tells the whole story, Castile appears to be an innocent Black man who was gunned down in cold blood by a very rattled young officer trained to think the public is his enemy. Castile appears to be shot for reaching for his wallet, after being specifically told to get his identification by the officer who shot him. The members of the public, who mostly get their news from television reporters and videos, have seen this story before.

Statistics seem to back up the belief that something is not right in the accountability of police in officer-initiated shootings. Scrutiny and accountability for police officers seems to have come to Minnesota in 2016. This is the first time an officer has been charged for a fatal shooting in Minnesota in more than 200 cases that spanned over 30 years (Collins, Feshir, Nelson, 2016). Philip Stinson, J.D., Ph.D., Associate Professor of Criminal Justice at Bowling Green State University in Ohio, got a National Institute of Justice grant to study police misconduct. He got the idea to study police misconduct when he realized there were little statistics on the topic. Many now consider his data set the best in the country as usual places for crime statistics, like The Uniform Crime Report by the FBI, do not track officer misconduct. The FBI does not even track all “justifiable homicides,” where officers are not charged because they are considered to have used force reasonably under the circumstances, as the reporting of these incidents is only voluntary.

The new statistics highlighted that officers weren’t being charged. Since 2005, when Stinson started to collect statistics, only 13 officers were convicted of murder or manslaughter in fatal officer-initiated shootings. Stinson estimates that there are around 1,000 police officer-initiated shootings each year. From 2005-2015, there were only 47 officers arrested and charged. This means that until 2015, an average of 5 officers each year faced charges. In 2015, the number of officers that faced charges rose to 18. In 2014 and 2015, no officers were convicted of murder or manslaughter despite the increase in officers facing charges. In over 99.5% of those cases, the shooting was found to be justified and the officer was not convicted. Only about one officer per year, on average, was convicted of murder or manslaughter (Elinson & Palazzolo, 2016). In all those other cases, just because they were considered to have a right to shoot, the question is whether they really should have shot. Many times, other officers will not testify against a fellow officer. This gives the impression the shooting was justified as other officers would have reacted in the same fashion in the situation. In his work, Stinson also found that statements by the shooter and other officers were sometimes inconsistent with video evidence. He questions if those shootings were really justified, or whether an officer got away with murder or manslaughter in some cases. He believes dash cams, body cams, smart phones, and surveillance cameras have increased the numbers of officers facing charges (Elinson & Palazzolo, 2016). In the future, they may also increase the numbers of convictions. The problem he sees with the emphasis on video is that video, especially cell phone video, usually only starts after there is a problem. That video does not capture the initial conflict.

The Officer Down Memorial Page (Officer Down, Inc., 2016) indicates that, while officer-initiated shootings were increasing, the number of officers who were killed in the line of duty may have been decreasing (Ferner & Wing, 2016). In 2014, 133 police officers died in the line of duty. In 2015, 129
officers were killed. In 2016, the page indicates that 140 officers were killed. The 2014 and 2015 statistics could be used to argue that police officers should have less reason to fear for their lives and become involved in officer-initiated shootings. The statistics for 2016 could show a reaction by some citizens to the increase in officer-initiated shootings. Police may now, more than before, have to fear being targeted by citizens (Emett, 2016).

The Decision-Maker

Nekima Levy-Pounds, the President of the Minneapolis NAACP, initially objected to the arrangement of Choi and Lewis conducting the investigation. Levy-Pounds concluded Lewis would not be an independent prosecutor in the investigation as long as Choi still would have authority over the case. She wanted an independent body to be appointed to investigate the shooting. She was even skeptical of the BCA investigating these incidents. She said, “We’re demanding justice: we’re demanding accountability. We’re demanding a change to our laws and politics that allow these types of things to happen. Too often officers are taught to shoot first and ask questions last, and that’s completely unacceptable” (Knight, 2016).

The federal government is now considering the use of special prosecutors. They may be pushing to investigate if charges should be brought in all cases in which police officers use deadly force. Asking a local prosecutor to investigate the same local police, with whom he or she works closely, is considered by many to be a conflict of interest. At a minimum, there is an appearance of impropriety that will lessen community trust in the results of the investigation. After numerous officer-initiated shootings, there has been a surge of support in Congress for a bill, the Police Training and Independent Review Act, to restore the public’s trust and reform policing (Police, 2015). Support for the bill grew from 62 co-sponsors before a prior officer-initiated shooting in Minnesota to 93 co-sponsors after the shooting of Castile (Cohen, 2016). The growth in support is a result of the increase in police shootings. The bill calls for the use of independent prosecutors.

Choi did not appoint an independent prosecutor to handle the decision of whether to bring charges against the officer in this case. As the Ramsey County Attorney, he believed the voters chose him to make the hard decision of whether to prosecute in cases (Associated Press 2, 2016). He did appoint attorney Don Lewis to assist him. There also were other people assisting the investigation. This was done to have more voices in the decision process while still having the process take place in his office. There have been calls for special prosecutors to investigate these cases at the state and federal levels. The week of July 10, Dayton had a private meeting with national NAACP President Cornell Brooks. Dayton was concerned about how officers in Minnesota interact with minorities. After this meeting, Brooks asked Minnesota legislators to pass laws that would encourage independent investigations and stricter prosecution of misbehaving police officers (Heilman, 2016). Whether there is a separate special prosecutor or whether independent people are placed on the prosecution team, this writer believes having additional voices beyond that of the prosecutor is very important. People can be angry no matter what the prosecutor decides. Protestors in Minnesota have maintained pressure on the prosecutor throughout the process (Capecchi & Smith 1, 2016). Had there been a decision not to prosecute, there is no doubt there would be protests to that decision. However, the decision to prosecute was not uniformly accepted. Police unions were concerned that this decision was blazing new ground and seemed designed to placate anger across the country for a variety of officer-initiated shootings and other decisions not to prosecute. Other prosecutors in Minnesota were surprised and indicated a trial and conviction would be very difficult under the law and circumstances in the case. Having a team with members that do not interact on a daily basis with the local community is beneficial to counter claims of favoring the police or bowing to the pressure of protestors.

Benefits in Using Grand Juries

While announcing the charges against Yanez, Choi commentated, “I know my decision will be difficult for some in our community to accept, but in order to achieve justice we must be willing to do the right thing no matter how hard it may seem.” He said that it would not be right to ask a grand jury to decide if charges should be brought when “I know in my heart what needs to be done” (Collins, Feshir & Nelson, 2016).
One thing this writer would have done differently is to test the decision the prosecution team reached to take the case to trial with a grand jury. A grand jury decides whether or not to bring charges. If a case is brought to trial, a trial jury decides guilt or innocence. A grand jury is 24 members of the community drawn in the same fashion and from the same pool as the trial jury pool should the case go to trial. At grand jury hearings, the evidence in the prosecutor’s case is not contested. The defense counsel is not present to attack the evidence. Instead, what the grand jury does is believe what the prosecutor says the facts are and assume all evidence will be admitted at trial and presented to the trial jury. The grand jury pursues whether there is enough evidence to support each of the elements in every charge the prosecutor will bring at trial. If the grand jury agrees there is enough evidence and the case should go to trial, the grand jury issues an indictment. When a grand jury is not used, a preliminary hearing is held. This is an adversarial process where the prosecutors and defense counsel test through argument whether the case is ready for trial (FindLaw, 2016). While the grand jury is seen by some as simply a tool of the prosecution team, the grand jury does provide an additional check on the prosecutor’s case. It is a shame to take a case to trial and lose. Trials are expensive and they consume court time. As the grand jury is drawn from the same sources the trial jury will be drawn, it is good to be assured 24 people agree with the decision to charge and agree there is enough evidence to convict on each charge. If the grand jury does not bring an indictment, it is a red flag to the prosecution team that a trial jury could decide not to convict. The prosecution team could still go to trial, but the team might need to gather more evidence first.

**Possible Outcomes**

**Yanez Could Be Found Guilty**

There are several possible reasons why Officer Yanez was charged, but as of January 2017, he has not gone to trial yet. First, community pressure was on prosecutors to bring charges and find the officer guilty of some homicide charge (Associated Press 3, 2016). No matter where this case is tried, it will be hard to find potential jurors who have not seen Reynolds’s video. Some may even have reached some conclusions on the officer’s guilt based on that video. People have also observed this type of incident in other states. Some potential jurors could have reached a point where, regardless of the law, the jurors and maybe even the general public want changes. These conclusions could cause jurors to decide to convict simply to force change.

Second, Choi believes the evidence supports the charges. After announcing his decision to bring charges against Yanez, Choi commented to reporters:

> No reasonable officer—knowing, seeing and hearing what Officer Yanez did at the time—would have used deadly force under the circumstances. The totality of the circumstances indicates that Officer Yanez’s use of deadly force against Philando Castile during the July 6 death was not necessary, was objectively unreasonable and was inconsistent with generally accepted police practices. (Capecchi & Smith 2, 2016)

Yanez told investigators that he feared for his life, as he believed Castile was going for his gun. Choi indicated that he did not believe Castile ever tried to pull out his gun. If Castile was not pulling out his gun, Yanez would have had an unreasonable fear, which cannot justify the shooting. Choi also indicated at the news conference that he thought Yanez’s statements were inconsistent. Apparently, he told officers who arrived at the scene that he did not know where Castile’s gun was. Yet to investigators from the BCA he indicated that he thought the gun was in Castile’s right hand. Choi did not believe Castile tried to remove the gun from his right pocket since the pocket “was a foot deep” (Capecchi & Smith 2, 2016).

Dayton praised Choi’s decision to charge in a statement released to the public. Family members of Castile indicated that they were pleased with the decision to bring charges. Larry Rogers Jr., Reynolds’s attorney, indicated that he believed the facts warranted harsher charges and would have liked to see murder charges rather than manslaughter charges. Rogers said, “There was absolutely no provocation [on the part of Castile] to justify what happened” (Collins, Feshir, & Nelson, 2016). Hatchett hopes for a conviction to send a message to the country that killings of citizens by police must be treated differently.

**Yanez May Be Found Not Guilty**

The prosecutors will have a difficult time establishing manslaughter. Yanez’s attorney, Thomas Kelly of Minneapolis, said the officer reacted after seeing a gun. He said that one of the reasons Yanez pulled
Castile over was because he thought he looked like a positive match for an armed robbery suspect. Kelly said, “The officer was reacting to the actions of the driver. This had nothing to do with race. This had everything to do with the presence of a gun…and the display of that gun” (Gurman & Foreman, 2016).

Yanez told the BCA investigators that he asked Castile for his driver’s license. Castile then told him that he had a firearm. Yanez then said he told him not to reach for it, but Castile’s hand kept going. He did not see the gun or know exactly where it was. When his hand was in the pocket, Yanez saw the hand gripping something. He said the grip was bigger than a wallet. At this point, Yanez feared for his life and shot. There may be no inconsistency here. While Yanez did not actually see a gun, he saw a hand grip something and knew where the gun was. Also, when Yanez talked to Castile, Castile did not look at him. He just kept staring straight ahead. Yanez told Castile to get his hand off it, but there was no response. This lack of eye contact and lack of response to commands is unusual and would be unnerving to Yanez (Ramsey, 2016).

This writer wrote an earlier paper on early news reporting on the case (Burum, 2016). This writer saw no reference to Yanez smelling burnt marijuana when he approached the vehicle. There also was no reference to the fact that the toxicology report showed that Castile tested positive for THC at the time of death before the release of the complaint. This is a game changer. This writer always wondered why there was such a loss of communication during the encounter. Cannabis has various psychological and physiological effects on the body. Some effects are the alteration of conscious perception and feelings of well-being or stress reduction. Attention, short-term memory, and decision making can all be impaired (WebMD, 2016). This could cause Castile to not pay sufficient attention to Yanez or focus on getting a wallet and not respond to the command to not go for the gun. It could cause Castile to go for a wallet forgetting his gun was in the same pocket. The drug could cause Castile to not look at Yanez but, instead, stare straight ahead. These impairments could increase the fear in Yanez as Castile was not responding normally and, as Yanez said, he could not get an appropriate response. While Castile had a permit for the gun and was entitled to carry a gun, a permit does not allow one to drive and carry a gun when one is so impaired that looking at an officer when spoken to and complying with an officer’s instructions are difficult or impossible.

A wallet, gun, and holster were found in Castile’s pocket. While Castile had a cargo pocket that was described as a foot deep (Ellis, 2016), one must remember Castile was seated. That easily makes that pocket in reach. People are easily able to reach their knees when seated. Yanez knew of the gun because Castile told him of the gun. Castile’s response after that point could have caused Yanez to fear for his life. Officers cannot wait for someone to pull things out of their pockets before reacting. Guns can be shot too quickly to respond if one hesitates long enough to actually see a gun pulled out of a pocket (Lewinski, 2016). Officers have an inherently risky job and are not required to be careless for the sake of indulging delicate sensibilities. The law is clear. This situation must be analyzed from the perspective of a reasonable officer in Yanez’s shoes. Yanez approached this case with the perspective that there could be a robbery suspect in the car. Fear for his life developed when Castile did not follow repeated directions not to go for the gun.

Self-defense is a response police officers can use if reasonable. Choi concluded no reasonable officer would respond the way Yanez responded (Associated Press 4, 2016). This writer has no doubt the defense counsel will find many experts who can testify as to how fast a gun can be fired and how hard, if not impossible, it is for an officer to shoot and stop an attack once a person has a hand on a gun. The defense may also find many reasonable officers who will testify to the fact that they could feel threatened for their lives in this case. The decision will go to the jury, but juries often give deference to officers in these situations. Officers do not go to work each day hoping to shoot someone. They hope to put in a day’s work and go home to their families.

The Minnesota Police and Peace Officers Association disagree with Choi’s decision to charge Yanez. They expect Yanez to plead not guilty and fully litigate each issue before a court (Collins, Feshir, & Nelson, 2016). Attorneys for Yanez are asking that the charges against the officer be dismissed. Their motion to the court states that Castile was negligent in his own death since he had “high levels” of THC in his system and he was not following Yanez’s orders (Associated Press 5, 2016). They remain
convinced that Yanez was reacting to the presence of a gun and feared for his life. Other prosecutors predict an uphill climb to convince a jury to convict Yanez. A manslaughter conviction in officer-initiated shootings has limited precedent in the state and nationally. The prosecutors have to prove the case beyond a reasonable doubt and get a unanimous jury verdict in Minnesota.

Yanez was also charged with two counts of misuse of a firearm. Reynolds was in the front seat passenger side of the car and a bullet hit an arm rest between her and Castile. Her 4-year-old daughter was in the back seat of the car behind her. A bullet also hit the back seat of the vehicle (Ramsey, 2016). These two charges will depend on whether the use of deadly force in self-defense in the situation was reasonable.

Any civil case to sue the officer and/or the department will also depend on the reasonableness of the decision to shoot. In the case of Yanez, the use of deadly force would not violate constitutional rights if the officer was justified in using that degree of force. The presence of a gun, whether or not the gun was by the wallet in the same pocket, and whether or not Castile continued to move his hand toward the gun, will be important here. Any federal 1983 civil action will depend on whether Castile was racially profiled and shot because the people in the car were Black. The facts do not establish that this was Yanez’s sole motivation for shooting. Having a “wide set nose” was just a part of a physical description, and the physical description was only part of the reason for the stop. The physical description was not a factor in the decision to shoot.

The Federal Government’s Response

In an email to fellow Republicans, Rep. Tony Cornish, R-Vernon Center and former law enforcement officer and Army National Guard Captain, condemned Dayton’s comments to reporters that Castile would probably still be alive had he been White. Some police officers responded very negatively to the charge of racial profiling by the governor, especially because an investigation had not even begun yet (Stassen-Berger, 2016). Besides his comment, Dayton also called for a federal investigation into the shooting. The federal government could investigate if there was racial profiling as that would violate a person’s federal constitutional rights. A group of 12 St. Paul DFL legislators lead by Rep. John Lesch, DFL-St. Paul, said that data shows conclusively that minorities in Minnesota are stopped, arrested, and convicted more frequently than White citizens. Lesch said, “At some point we have to get past all the blaming and dig into the systemic problems of poverty and unemployment.” Lesch continued, “With the backing of Cornish and other law-and-order legislators, leaders of the Minnesota Chiefs of Police are already digging in against possible changes to how state police do their jobs” (Heilman, 2016).

On December 14, 2016, it was reported that the Department of Justice’s Office of Community Oriented Policing Services would conduct a review of the entire St. Anthony police department. This is the 16th time nationally this office of the Justice Department has conducted this type of review. Reviews by the Office of Community Oriented Policing Services started in 2011 (Collins & Feshir, 2016). The review will not investigate particular cases or incidents. Instead, the review analyzes a department’s policies and practices that could affect the public’s trust. The focus is on identifying changes that could improve the department’s relationship with the community it polices. The investigation will bring in community policing experts to review the department’s documents, accompany officers out on calls, interview officers, host community forums, and look at hiring and recruitment practices. This review could take around 10 months. The Justice Department will then publically release its recommendations. The next 18 months will then be spent implementing the recommendations, and the Justice Department will release periodic reports on the department’s progress (Collins & Feshir, 2016). This is collaborative reform. It is voluntary and begins when a city or department requests help from the federal government. It is up to the city and police department to implement the changes it chooses. But, as everything is made public, public pressure can force departments into making changes. The other 15 departments that have gone through this process were much larger departments. St. Anthony is the smallest department to go through this process so far. Three-quarters of the nation’s police departments have fewer than 25 officers. This is around the same size as St. Anthony.

What happens in St. Anthony’s review could have ramifications for other small police departments (Collins & Feshir, 2016).
There is some evidence that the Department of Justice’s Office of Community Oriented Policing Services review had some success in Philadelphia, Las Vegas, and Spokane, Washington. The types of changes they made were to update their use-of-force policies with retraining of officers into the new policies, implement the use of body cameras, and reform the investigative procedures in officer-initiated shooting cases. These three locations saw significant drops in the number of officer-initiated shootings after the changes (Collins & Feshir, 2016). It has yet to be seen whether this type of review will have success in small police departments.

If, during the course of the Justice Department’s investigation, evidence of repeated or systematic violations of constitutional rights is discovered, the Justice Department’s civil rights division can conduct a “pattern or practice” investigation into the police department. The Justice Department can also bring a “color of law” investigation into individual officers who are found to be violating citizen’s constitutional rights. When the federal government investigates officer-initiated shootings, it often uses the FBI to look into both violations of color of law and pattern or practice investigations (Vezner 1, 2016).

A color of law investigation is a criminal investigation and focuses on a particular officer. In this type of investigation, the federal government would have to determine beyond a reasonable doubt that the officer acted with the specific intent to violate Castile’s constitutional rights. Yanez would have to know what he was doing was wrong and willfully do it anyway. Basically, he would have had to intend to harm or kill Castile because of his race. Stopping Castile for “a wide set nose” would have to be the sole reason for stopping the car and shooting Castile. This case does not appear to fit the criteria, because Castile appears to also have been stopped because he fit the description of a robbery suspect and had a burnt-out brake light. Castile appears to have been shot, not because of the appearance of his nose, but because the officer thought the presence of the gun and Castile not following orders to stop reaching in the vicinity of the gun caused the officer to fear for his life. These facts would not allow federal officials, under federal law, to charge the officer with some lesser offense like manslaughter or negligent homicide. These are state crimes and can only be brought by the state. Federal prosecutors can only charge for violating federal crimes (Tevlin, 2016). It would be highly unlikely to have any federal crimes in this case.

A pattern and practice review analyzes a department’s policies and practices that could affect the public’s trust. It is a civil investigation into the entire department. This action was created after the Rodney King case in Los Angeles in 1991. It was designed to look at a department’s overall practice and procedures. Since 1991, this type of investigation has been used 23 times. St. Anthony released data in July of this year that showed of the 994 arrests made since the start of 2016, 47 percent of the suspects were Black and 46 percent of the suspects were White. Ten arrests did not indicate race. According to U.S. Census data, only 7 percent of the citizens in St. Anthony, Lauderdale and Falcon Heights, the area patrolled by the department, were Black (Vezner 2, 2016). This type of data could be used to question whether the department was racially profiling and discriminating on the bases of race. It could cause federal investigators to question if the department’s policies and practices were violating certain citizens’ constitutional rights. At the time of this writing, it is not certain if either type of action will result from the initial investigation. None, both, or either type of investigation could ultimately be conducted depending on what the Office of Community Oriented Policing Services discovers through its investigation. If pattern or practice is perused, the end result could be a settlement agreement, consent decree, where the Justice Department and the city come to an understanding on what changes need to be made. The Justice Department here calls the shots and the understanding does not have to be voluntarily reached with the city or police department. Progress in making the changes is mandatory and monitored by a federal judge.

**Conclusion**

It is good that an independent prosecutor was incorporated into the prosecution team in this case, as it spreads the blame if there is a decision not to charge, or there is a charge but no conviction. It should be done in other cases, too, because it is hard for elected prosecutors to do something different than what the community wants. This writer believes grand juries are valuable and should be used in these cases as they allow the community to have input into the charging decision. This may make decisions not to prosecute more acceptable to the citizens in the community. The Justice Department may be less inclined to interfere with the operations of police departments if they see evidence that department’s attitudes, policy,
and procedures are in line with promoting equal justice under the law. Convictions for police officers acting in the line of duty are based on what the average, ordinary police officer would have thought in the situation. It is not based on what the average citizen might think or wish would happen.

Black Americans have had a history of oppression in this country and believe mistreatment by cops to be a continuation of oppressive, discriminatory, institutional roots. Yanez, however, may be a patsy in this case. He may have followed the correct legal procedures/standards and his use of force may have been reasonable. The part of the BCA report used in the indictment, despite Choi's recommendations, provides potential evidence to clear Yanez of wrongdoing. However, the public seems to be demanding accountability, possibly to keep their collective consciences clean. Ergo, Yanez might be, simultaneously, a modern and classic scapegoat in the sense that he's (possibly) an innocent party being sacrificed as community atonement for past misdeeds (and perceived present misdeeds) against Black Americans. But, offering a scapegoat for the sake of community atonement would not be justice for Officer Yanez. Yanez must be evaluated by the laws as they exist now—not as a patsy, and not by hypothetical, reformed laws one might wish were in place. If people want different standards for the use of deadly force for police in on-duty, officer-initiated shootings, then the laws need to be changed. But, under current law, Yanez might be legally protected and should not be offered as a scapegoat to atone for racial problems that still haunt this country.

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The Legacy of the Social Sciences: The Decline of the Liberal Arts and the Ascent of Pre-Professional Programs

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Introduction

For some time, there has been a debate within the United States concerning the "value" of a college degree in the arts and humanities. What seems to have perpetuated this debate is three-fold: the increased cost of higher education, the high levels of student debt accumulated because of said cost, and the perception that the arts and humanities are unable to provide students with the necessary skills to gain employment after graduation. The national debate that has ensued has produced a score of authors/pundits/politicians who feel compelled to either defend the arts and humanities on grounds that these subjects provide a well-rounded education for life-long learning or deride these subjects as outdated and unwilling to adapt to changing times (Brooks and Jewett, 2014; Levitz and Belkin, 2013; Nussbaum, 2010; Sommer, 2014; Tworek, 2013). Found amongst the literature that defends the subjects in the arts and humanities is an array of works that condemn the proliferation of pre-professional degree programs concentrated in business schools (Applebaum, 2016; Arum, 2011; Glenn, 2011; Kadlec, 2010; Morsing and Rovira, 2010). These scholars have argued that the liberal arts have suffered (and society as a whole) because business degrees that promise greater employment security fail to deliver on the overall promises of life-long learning which has served as an understanding of the historical value of education. What I intend to do in this article is to add a nuanced perspective to the existing literature by demonstrating that those who have historically supported the value of a liberal arts education have also, to a certain degree, been responsible for the promotion of the highly-specialized, pre-professional business programs they have derided as antithetical to what should constitute an appropriate college education. Secondly, I will argue that the development and preponderance of pre-professional degrees has also been in response to the increased costs of higher education. As colleges have become more expensive, many have felt compelled to offer degrees that promise greater financial opportunities.

In order to demonstrate these concepts, I will examine four trends within the American experience: the expansion of equality, the rise of the behavioral and social sciences, the resultant rise of pre-professional degree programs, and the increased cost of higher education.

Equality: Past and Present

During a nine-month expedition that covered most of the United States in 1831-1832, Alexis De Tocqueville wrote what many consider the most insightful analysis of American democracy (Tocqueville, 2003). Writing from the perspective of an outsider, De Tocqueville desired to understand how the American system and its people functioned. During his nine-month stay, he noticed several differences between his native France and the United States, but none was more apparent than how the American people valued the notion of equality and placed it within every facet of public life. For De Tocqueville (2003) "democratic peoples' . . . passion for equality is ardent, insatiable, eternal, and invincible” (p. 585). It served as the standard by which laws were applied and the grounds upon which challenges to laws were articulated. Political and social theorists have always been interested in notions of equality. However, its placement within the sphere of what constitutes natural rights is new. For example, Plato and Aristotle examined equality in terms of one's ability. In perhaps its earliest treatment, Plato (2009) demonstrated that both a master and slave share the same intellectual potential because both could perform general mathematics without previous instruction. Aristotle's conception of equality is similar, but his focus had
more to do with justice and the practice of providing rewards for excellence. For Aristotle (1981), the best societies bestowed honors upon those individuals whose performance demanded it. He presented the example of the musician whose society treated all goods in egalitarian terms regardless of skill levels. Aristotle asked, “Who deserves the best flutes? The best flute players, of course!” (1981, pp. 206-209). It would be unjust (and illogical) to treat equal beings unequally and unequal beings equally. Societies that make this mistake provide a disservice to their citizens because they mask abilities with their opposites and lack an appropriate rewards structure.

Modern life, however, has changed such designations. Democracies have come to define equality in terms of access and treatment. In other words, citizens are deemed equal because they possess natural rights. Citizens deserve access to those goods and services that are in line with their rights and require equal treatment not because of any ability they possess but because they are human. Thus, equality is intrinsically bound to the modern belief that justice is based on the level of freedom that prevails in society. It is this definitional change that Tocqueville witnessed during his nine-month journey in the United States.

Since then, equality has become one of the standards by which democracies are judged because it is the feature that protects and preserves the freedoms we were given by not only constitutional decree but also natural law. This is the reason as to why democracies are consistently searching for ways to increase the "equality of their conditions" (Deneen, 2011, p. 1). This expansion, however, has also led to one of the main dilemmas of modern democracy: as equality expands, individual freedom contracts. Limitations placed on everything from speech and action to wealth accumulation enhance equality but limit the freedom that was once deemed acceptable. This balancing of freedom and equality will always create tension in democratic societies because equality requires a “leveling effect” among otherwise different people whereas freedom does not (Fairman, 2013, para. 4). In this view, one's freedom must be tempered by laws that preserve the equality for all but remain as limited as possible so not to restrict too much of the freedom that he/she had in the first place. This balancing act constitutes the previously mentioned dilemma for modern democracies. This dilemma is also the standard by which the political ideologically spectrum is constructed and one of the primary reasons why the social sciences developed when and as they did.

The Rise of the Social Sciences

For more than 700 years, university life consisted of the mastery of the seven liberal arts: grammar, logic, rhetoric, arithmetic, geometry, astronomy, and music (Abelson, 2006). It was believed that this knowledge formed a core foundation in the arts and sciences. If one possessed a knowledge steeped in the liberal arts, he/she was well equipped to handle the challenges of life. Colleges and universities had been designed to instruct the aristocracy and those entering a religious life in the pursuit of knowledge, leadership, and virtue. The classics were interpreted, studied, and challenged. However, as societies changed and capitalism developed, monarchs fell and individuals clamored for both political representation and economic security. During the middle of the nineteenth century, the educational model that had ruled University-life since the twelfth century had changed.

It is not an accident that the social sciences emerged when Western societies were transitioning from agrarian to industrial economies. Most of the writings of the liberal, social contract thinkers of the seventeenth and eighteenth centuries had gained greater attention from intellectuals inside and outside of government. The view of natural rights as articulated by John Locke (2003) defined equality in terms of the human ability to reason and the desire to protect one's life, liberty, and possessions. It also created the philosophical justification for Adam Smith's (2003) free market-based concept of absolute advantage and, later, David Ricardo's (2004) concept of comparative advantage. Agrarian societies became inefficient at meeting the needs of a growing global economy and damaged the prospects of future trade. For societies to gain in wealth they needed to grow in efficiency. The more efficient a state was, the more wealth it could create, and a democracy that allowed its citizens to pursue an unfettered life would gain the most. This was the logic of liberalism and neo-classical economics of the late 18th and early 19th centuries.
The new economic and political strategies created a variety of positive and negative features within societies. There were new forms of social mobility but also higher levels of exploitation. Innovation led to new pathways to wealth but also higher levels of poverty. These social changes required both a new class of intellectuals to understand them and a new method of how to understand them. The method that the new social thinkers chose was based on science and their conclusion was that by analyzing social ills/gains in a quantitative manner they might gain a greater understanding of their significance. Thus, we witnessed the rise of the modern social sciences: anthropology, political science, economics, linguistics, sociology, criminal justice, and psychology. Each one emerged from new social changes but also in response to the expansion of equality as the guiding feature of democracy. It is worth mentioning that the social sciences are not merely modern but also revolutionary. The canon of works that comprise the social sciences emerged in conjunction with massive social changes. The move from agrarianism to industrialism was just one change. Changes from autocracy to democracy or from feudalism to capitalism were just as significant to the emergence of the social sciences. These changes positioned the social sciences as the champions of the oppressed. If democracies were designed to enhance equality, then the social sciences would play a significant role in what constituted new forms of higher thinking (Mahoney and Rueschemeyer, 2003). By the early twentieth century, the arts and humanities were still capable of bringing culture and civility to social life; however, their monopoly over intellectualism was waning. Their desire to upend the social structure that disadvantaged members of the lower and middle classes helped to create a new role for colleges. Colleges needed to develop degree programs that could directly benefit that emerging economic order.

As the literature in the introduction has noted, what has occurred is a transformation of higher education from one whose focus had been on the arts and humanities to one that is focused on majors and programs that provide students with perceived income earning potential. If the goal of the social sciences was the expansion of opportunities to more people; than it has been successful. However, it appears that the expansion of opportunities has come in the form of degrees that promise financial security to counter the increase in the cost of higher education. To better understand how this change specifically affected higher education, one must look at the role that education has played in the development of American democracy as well as the cost and promise of contemporary college degrees.

**The Cost and Promise of Higher Education**

From its inception the leadership of the United States, a product of both liberalism and federalism, understood that an educated populace was vital for future success. After all, any society that proclaims that its sovereignty rests within the people needs to ensure that its people are educated. As Thomas Jefferson in an early letter noted, “Educate and inform the whole mass of the people, enable them to see that it is their interest to preserve peace and order, and they will preserve it...They are the only sure reliance for the preservation of our liberty” (1787, para. 3.). This commitment to education stemmed from the fundamental assumption that human equality is based on one’s ability to reason. Since humans are equal in their ability to understand concepts like natural law and natural rights, and this equality underscores American democracy, we must try to extend our educational system to as many as possible. The better educated the populace, the better the democracy.

Thus, over the past century we have seen an expansion of primary and secondary education to almost everyone. According to Statista: The Statistics Portal (2017), in 1940 a little more than 50 percent of Americans graduated high school; today, more than 80 percent do so. College and university completion rates have followed a similar trajectory. In 1940 some 4.65 percent of Americans earned a bachelor’s degree. In 2015 that number had grown to almost 33 percent. Education has always been valued as a gateway to a better life and continues to be championed as a strong indicator of equality. Although quality varies across states and institutions, the notion that education can solve social ills and elevate one's station has persisted. According to a recent Gallup Poll, 94 percent of respondents stated that a “postsecondary degree or credential is at least somewhat important”, and 70 percent stated that it is very important (Calderon and Sorenson, 2014). In the United States, then, it appears that the expansion of higher education was designed to rectify inequality (Haveman and Smeeding, 2006; Hurtado, 2007; Husu, 2010; Rhoads and Torres, 2006). In fact, even before the passage of the Morrill Land Grant Act (1862) which
dedicated revenue and land for the establishment of large-scale universities, there was the Northwest Ordinance (1787) which did much of the same. As Thelin (2004) has written: “Congressional land grants for higher education were made to seventeen states between 1796 and 1861. This largesse included 100,000 acres to Tennessee and 46,080 acres each to the new states of Louisiana, Indiana, Mississippi, Illinois, Alabama, Missouri, Arkansas, Michigan, Iowa, California, Oregon, and Kansas. Ohio, Florida, Wisconsin, and Minnesota received even larger congressional land grants ranging from 69,120 acres to 92,160 acres” (p. 75). These developments were designed to provide and expand access to larger swaths of American society with the hope that attending students may reap the benefits enshrined in our founding documents. However, the expansion of access did not necessarily mean access to new degree programs and areas of study. Agricultural sciences might have been a new area of study, but it was still couched within the overall focus on the arts and sciences. It was not until the 1970s that colleges and universities began to pursue new types of baccalaureate degrees; those that carried with them the allure of financial success.

To put this in perspective, in 1900 there were four American colleges/universities that offered business degrees: the Wharton School of Business at the University of Pennsylvania, the Haas School of Business at the University of California, the Booth School of Business at the University of Chicago, and the Tuck School at Dartmouth. The mission of these early business schools was simple: “to provide students with the necessary technical skills and to imbue them with the sense of public responsibility” (Cox, 2017, p. 21). The curriculum at each school was designed to ensure that American businesses would be managed by experts who could help to expand the United States as a global power.

However, since the 1970s, the mission of business schools has changed as their ranks have swelled. According to Tourish (2013), most top business schools today attempt to attract students that are diametrically opposed in character, to those they would have attracted one hundred years ago. For example, the leadership at most top business schools who have to compete for high-quality students resort to rhetoric grounded in “hubris and narcissism” (Tourish, 2013, p. 103-105). They stress financial rewards and a pragmatic curriculum designed to attain jobs and wealth. This change in vision has taken place just as the number of business degrees as exploded. Today there are 480 business schools that offer the Master’s in Business Administration degree and “business has been the single most common major since 1980-1981” (Desilver, 2014, para. 3).

In a report provided by Georgetown University’s Center on Education and the Workforce, the top paying college majors (science, technology, engineering, mathematics, health, and business) earn $3.4 million more than the lowest-paying majors over a lifetime” (Carnevale, Cheah, and Hanson, 2015, 1). These statistics indicate that that there has developed a large demand for certain majors (those that promise financial rewards) at the expense of others. The increase in the number of business degrees (and therefore business schools) best exemplifies this demand. In 1970, there were 114,000 business degrees awarded. By 2010, that number had increased to 367,000 (Bui, 2014). What has driven business schools and other pre-professional degree programs to utilize “income earning potential” as a selling point is not only the economic clout of the major but also the cost of college, which has increased at an alarming rate. According to the US News and World Report ranking of the best Business programs in the United States, the top ten business schools in the United States (Harvard, University of Pennsylvania, University of Chicago, Massachusetts Institute of Technology, Northwestern University, Stanford University, University of California-Berkeley, Dartmouth College, Columbia University, and Yale) had an average tuition of more than $65,000. This is not surprising. They are the best colleges and universities in the United States. What is surprising is that the bottom of the ranked list still sees tuition averaging more than $40,000 per year (US News and World Report, 2017, p. 4). As tuition has increased at colleges and universities, so too have degree programs and majors designed to justify the increased costs. Unfortunately, however, many of the degree programs that promise success cannot justify the increase in tuition.

According to The Economist, the “cost of university per student has risen by almost five times the rate of inflation since 1983, and graduate salaries have been flat for much of the past decade (and)... those who borrowed for a bachelor’s degree granted in 2012 owe an average of $29,400” (2014, para. 10). This
is the dilemma of contemporary American higher education. Americans are paying more for a college
degree and are willing to do so as long as the earning potential for certain degrees stays strong. Unfortunately for those in the arts and humanities, the story has gotten bleak. This change in the story of American higher education can also be seen as a change in modern democracy.

As colleges and universities expanded both their numbers and their degree offerings opportunity has expanded for more Americans. However, as opportunity has expanded, education has become more functional. As functionality has expanded, the populace has become less interested in a curriculum grounded in anything other than that which is perceived as advantageous to the advancement of the individual and his/her economic role in the state. For example, the degrees in the traditional arts and humanities that have been targeted the most in this environment have witnessed a decline of almost 9 percent over the past five years (Jaschik, 2016). Colleges and universities, like other market-driven institutions, felt the need to create degrees that catered to the specificity of the white-collar workforce. A society that has seen an explosion in jobs related to finance required a degree in finance. A society that has seen an explosion in jobs related to health care requires degrees in nursing and other health sciences. Although both industries would have been well served by traditional degrees in mathematics and science, the perception created by market forces was that specificity and functionality determine one’s success in college and subsequently, in one’s career. This transformation has also helped modern colleges and universities justify increases in administrative costs. If college students required a diverse array of courses, majors, and disciplines, then they too must require a diversity in administrative services. Since 1995 public universities have seen in-state tuition increase by 296 percent and out-of-state tuition by 226 percent (Mitchell, 2015). Furthermore, “Colleges [have] hired 87 administrative and professional workers every day from 1987-2012 (Mirzadeh, 2015, para. 4). This increase in administrative professionals has also coincided with the aforementioned increase in tuition.

This new trend, however, is the product of modern democracy as much as it is the product of modern capitalism. If social scientists are correct in their assumption that higher education can effectively combat economic and social inequality, then the public must understand that the cost of higher education will continue to increase. This appears to be a gamble that most Americans are currently willing to take. However, if social scientists could influence policy makers, both within academia and government, on the unsustainability of said costs, they might be able to eliminate the economic burden of future college graduates and see a revival of the liberal arts.

The grand irony in this analysis is that in many ways the rise of the social sciences (along with the increased levels of inequality) has helped to promote much of what those in social sciences had hoped to eliminate. We must remember that, for the most part, social scientists work in the business of higher education, a highly exploitative enterprise. The rise of non-traditional, pre-professional degree programs (which many condemn) serves the aims of those who wish to eliminate barriers to employment. If colleges and universities, through their delivery on the promises of success as articulated by those in the social sciences, wanted to expand opportunities, then they have accomplished what they had intended.
References


And So It Began

As the train pulled away from the station the children all pressed their faces against the windows for one last look at the city. Some were excited, others fearful, but all wondered what their lives would be like at the end of the journey. Thus, began a journey across the country on trains referred to as “Orphan Trains”, a phase first used in 1854 to describe the transportation of children outside their home localities on the railways (Trammell, 2009). This trip began a little known but significant event in America’s past.

For seventy-six years, between 1854 and 1929 these trains annually crisscrossed the country. While accurate numbers were not maintained it is estimated that during this period 200,000 to 250,000 homeless children primarily from New York City, but also Boston and Philadelphia, were transported west to homes in towns and farming communities of rural America. Various factors gave rise to the differences in estimation: institutional records were not always well maintained; some children were counted multiple times, and as Rebecca Trammell (2009) points out many records have been lost or destroyed. Ages of the passengers varied; some of these children were infants, others were teenagers, and many were siblings. It is interesting to note that while not large in numbers not all were white. As they traveled across the country, stopping at prearranged stations, families would view the children and where an appropriate match was made select a child and took them into their homes. Most became foster children. While adoption laws were weak or nonexistent at the time a few were adopted into the host family. Quite often older children lived as boarders, apprentices, or live-in laborers (Warren, 2001). Most assimilated well finding happiness and enjoyment in their new homes. In reality, this was not always the outcome. Because follow up monitoring was sporadic, some children were abused finding their new life one of indentured service or even abuse. Where did these youngsters come from and how did they end-up standing in line in a strange town, surrounded by unknown people, waiting for selection and distribution?

Orphans, Foundlings, Waifs, Half-Orphans Street Urchins are all terms used to describe children who rode the Orphan Train (DiPasquale, 1996). In actuality, while only about 25% were true orphans, they all were homeless and neglected street kids, given-up by parents, who were poor and unable to provide for their well-being. Andrea Warren (2001), in her book We Rode the Orphan Trains, estimates that when the trains first journeyed West, in the mid 1850’s, 10,000 to 30,000 abandoned children were homeless or institutionalized in New York City. In 1849, New York’s Police Chief reported that 3,000 children or 1 percent of the city’s total population lived on the streets (O’Conner, 2001). It was common for children, during periods of hardship, to be abandoned by their families. Still others were runaways, or true orphans. Many of the children, in an effort to survive became incorrigible, and delinquent often joining or forming gangs. It has been speculated that a delinquent runaway by the name of William Bonney, later known as Billy the Kid, was an orphan train rider.

Providing Hope

In New York City, the two main institutions involved in the care and relocation of children were the Children's Aid Society and The New York Foundling Hospital.
Of these, the first and largest institution, was the Children’s Aid Society, founded in 1853 and directed by Charles Loring Brace (1826-1890). Brace was the son of a wealthy Hartford, Connecticut family and a Yale divinity graduate. At age twenty six, then a minister and reformer, Brace relocated from Connecticut to New York City. Appalled at the living conditions that were springing up in the squalid slums of the city, he conceived the idea for the Children’s Aid Society. He envisioned the Society as a place that would provide children food, shelter, training leading to a passage out of the city slums.

The model Brace concentrated on replicating was one witnessed, during his earlier travels to Europe. There he observed small groups of children being moved from the slums of London to rural areas for “placing out”. In his working and wandering around the worst slums in New York City, he began to focus on an expanded vision of help that went beyond the orphanage. Believing that the abandoned children of New York City were innocent victims of miserable social and economic conditions, they would be better off with a family than in an institution or on the streets. He concluded that families in their western migration to open new lands needed extra help and these children could fill the labor gap. In return for their labor, families would provide children with food, clothing, and a living space for their help. Secondly, Brace envisioned the potential the expanding rail system offered as a means of transportation in placing out. Reverend Brace put his plan into motion and the first train went out from the Children’s Aid Society on September 20, 1854 with 46 ten to twelve year old boys and girls. Their destination was Dowagiac, Michigan (DiPasquale, 1996).

Because these trips could take several days, or even weeks, travel agents or chaperones accompanied each train. These individuals were employed by Children’s Aid Society. In pre-travel, chaperones were responsible for advertising the itinerary, arrival time, and meeting place to see the children. Additionally, they saw to preparing the children for travel which usually included providing each a Bible, getting a haircut, and outfitting travelers with two sets of clothing (Warren, 1996). During transport, agents would provide for food, lodging, and other needs that would come up. Even with this, conditions on early trains were little better than cattle cars and lacking in eating space, bathroom facilities and sleeping areas. Once at a destination, the agent would arrange for a viewing and selection of the children. The requirements for perspective host families were minimal at best. Brace’s directions on the selection process was rather simple. He would leave the process up to the local community. In the case of the first trip to Dowagiac, Michigan the local residents picked out the child they wanted provided the family had a letter of recommendation from a pastor and the local justice of the peace.

Steven O’Connor, in his 2001 book, Orphan Trains, The Story of Charles Loring Brace and the Children He Saved and Failed, picks up the story ten days after leaving New York City on the morning of October 1, 1854, where 45 children sat on the benches in the Dowagiac meeting. While a few were teenagers, most were between ten and twelve. Note the discrepancy in numbers of children leaving and arriving, this was quite common and shows why an exact count of riders cannot be given. Over the next several days, 37 boys and girls went to live with local farmers and merchants. The remainder moved on to Iowa City were they too were placed with local families. As a result, all of the children were successfully placed in new homes.

Reverend Brace, considered this first endeavor such a success that he arranged for two additional trains to be sent off that January. Thereafter, on average from 1855 to 1875, 3,000 children from the society, rode the trains each year (Warren, 2001). While ridership varied the average group numbered from 25 to a 100 children per journey.

A second organization, the New York Founding Asylum later renamed the New York Foundling Hospital was opened in 1869 by the Sisters of Charity of St. Vincent de Paul, under the direction of Sister Irene Fitzgibbon (1823-1896). The reasoning and goal of Sister Irene and the New York Foundling Hospital followed the same logic of Reverend Brace and the Children’s Aid Society. However, there were several differences in the age range of the children and how children were placed with families (DiPasquale, 1996).

Since the ending of the Civil War in 1865, toddler, infant, and new born abandonment was a growing concern in large cities especially New York. Sister Irene offered a solution, release the baby into the care of the Asylum. The original opening date was set for January 1, 1870; however “The first abandoned
baby arrived on October 11, 1869, and 45 more babies followed in that first month. The need for this type of service was confirmed by the 126 babies that were left by January 1, 1870. After two years, the Foundling had accepted 2,500” (DiPasquale, 1996). Within a year Sister Irene had out grown the location and had to move to larger facilities.

While both agencies held to the mission of “saving children”, each went about it in a slightly different manner. The major difference was in the placement and destination selection of children. The Children's Aid Society used the town-to-town random selection while the New York Foundling Hospital favored the pre-request and order format. From the 1880’s, based upon the concept of catalog purchasing supplied the country with items large and small. Sears and Roebucks lead the way and the New York Foundling Hospital adopted and modified this model. Steve Hornstein in an 2010 article, The Orphan Trains of the Saint Cloud Area explains, "Families could request a particular type of child; skin, hair, and eye color; and the sex of the child. In this manner a family that ‘ordered’ a child would be sent a ‘Notice of Arrival’ which informed them when and where to meet the train and receive their child.” While the selection and distribution process employed by Charles Brace was rather informal, this was not the case with Sister Irene. The transfer of care of the children was under the guidance of a local priest. Families would sign a contract acknowledging the arrival of the child and agree to raise him or her, in the Roman Catholic faith, provide for an education, and when requested update the Sisters of Charity a summary of how the child was adapting to their new home. Over the years of involvement the New York Foundling Hospital is estimated to have placed 30,000 children.

As the railroad expanded so did the area covered. Trains eventually stopped in towns in 45 states. Some children were placed outside of the United States. It has been documented that at least 566 children were sent to Canada, a small number to Mexico, and another 59 to the Indian Territory, which later became Oklahoma. All told, by 1929, when the Children’s Aid Society sent its last true orphan train west to Texas, roughly 250,000 city children, from the various agencies had found foster homes (O’Conner, 2001).

The Causes

What were the causes and why were so many children involved in this youth migration? In looking at the reasons for why so many children found themselves in orphanages and abandoned to the streets, several factors come into play.

The Civil War created a dual problem; one of cause and another of need. America was a rural agrarian country consisting of small family farms. The majority of men, both North and South, who took part on the Civil War were from these farms. The war was very costly in human lives, it is estimated by researchers, using current methodologies, that nearly 750,000 men died from various causes during the war and many more, received wounds that prevented them from engaging in farming (White, 2016). This sharp increase in fatherless or impaired households lead to widespread economic decline and poverty. With limited employment opportunity outside the home many widows and mothers were left with few options other than giving up their children.

Additionally, these losses and physical limitations tied with the Homestead Act of 1862 created a need for labor replacement and expansion in the Midwest. The Homestead Act, signed by President Lincoln, offered northern veterans of the Civil War free land for homesteading brought about a mass migration and filling of the Midwest with small farms. Between 1862 and 1934, the federal government granted 1.6 million homesteads for private ownership. In working the land it was common and not unusual for children as young as 6 and 7 providing to the family labor force.

The national economy after the Civil War, especially in the North, experienced rapid manufacturing and industrial growth identified as the Second Industrial Revolution. With growth came distinct periods of expansion and decline in the economy. Stock Market volatility, economic boom and bust, and employment declines resulted in recessions and more devastating, “Panics”. During the peak years of the Orphan Trains, several notable economic downturns were the Panic of 1873, 1893, 1896 and 1907. Each resulted in a loss in earnings and high unemployment with increase in child abandonment.

Another connection to the growing numbers of children in institutions and homeless was the lack in public health services and medical care. As living conditions in the cities became more congested so did
the spread of disease and epidemics. The trend of large families coupled with poor, if any, medical care resulted in high mortality rates for women and newborn children. Surviving husband, most often, could not care for the remaining children leaving them to fend for themselves as best they could.

Immigration and discrimination also played a part. The large influx of Irish immigrants in the period from 1845 to 1880’s, and later immigrants from southern and eastern Europe, helped contributed to the large numbers of street children. Tim Riley (2004), contends, of the 250,000 children were transported from New York to the Midwest over a 75-year period (1854-1929) in the largest mass migration of children in American history. As many as one in four were Irish. Immigration Trends 1880-1900, reports that between 1880 and 1900 an estimated 9 million immigrants came to the United States. Often discriminated against and denied jobs and housing, these immigrants were left little choice but to live in the slums under crowded and unsanitary conditions. For this reason, child abandonment, gang involvement, and runaways were extremely high. These then are examples of the many reasons as to why so many children found their way to the Children’s Aid Society and The New York Foundling Hospital.

The Need

America was changing, this was especially true in agriculture. The Morrill Act of 1862, also known as the Land Grant College Act, was set up to establish colleges that would focus their programs on educating students in agriculture, home economics, mechanical arts, and other professions that were practical at the time.

Just as the opportunity to free land for homesteading was being offered to families willing to move west, other dynamic changes in agriculture, farm equipment, and product markets were taking place. New methods and a scientific approach in farming resulted in new crop varieties and larger crop productions. Whereas crop production was traditionally to provide for the family and a small local market this was to change. The introduction of barbwire in 1874 closed the open range and made the land more conducive to commercialized farming. The transcontinental expansion of the railroads opened new markets. Farmers were now producing a surplus which had a market and a means of transport to get it to that market. Beginning in the 1890’s agriculture increasingly moved away from horsepower toward mechanization. Towns began to establish in support of the agriculture community. What was needed was a labor force which the orphans of the east moved in to help fill. Trammell (2009), found that in 1910, 72% of children ages 10 to 15 were employed in agriculture and that they were not only employed on their own family farms but were hired out as extra hands on neighboring farms. Being the orphan trains brought an instant workforce, placements particularly those of children 12 and older, continued to grow in response to the Midwestern and Western need for farm labor.

End of an Era

When the relocation of children began in 1854, there were very few laws regarding adoption and foster care placement and child protection. Also lacking were regulations on the transport of children across state lines or verification to the status of the children involved. An example, the New York state legislature in 1855 passed legislation, in support of the process, that made it lawful to transport children across the state line for the purpose of placing out. Moving into the twentieth century, and post-World War I period, this all began to change with child welfare reforms. States passed laws on adoption and the formalization of foster care. The federal government became involved too in passing child protection laws including prohibiting the transport of children across state lines. Taken together, these actions curtailed the orphan train movement and by the 1920’s the number of yearly Orphan Trains decreased sharply with the last train setting out from New York in 1929.
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Are LOW Socio-Economic Students Being SET-UP for Failure?

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Abstract
How many billions of tax dollars must be spent before public education makes a change? The reality of teaching in today’s classroom is so challenging that up to 50% of the new and inexperienced teachers leave each year. At risk students, low socio-economic students and minority students experience new and inexperienced teachers year after year and fall further and further behind academically. It is a misnomer teachers with over ten years of teaching experience do not lead to greater student achievement. This paper makes argument and recommendation for education leadership to make changes. The achievement and success of students in schools now and the next generation are at stake.

Introduction and Purpose
Many children are left behind their peers academically each year and their chance of catching up decreases with each passing day. These students consistently have an inexperienced teacher and live in a low socio-economic school district. Billions of tax dollars are spent and loss developing new teachers each year (LeSage-Clements, et al., 2013; Ingersoll & Merrill, 2010; Phillips, 2015). Billions of tax dollars are invested in teacher preparation programs, professional development, recruitment, loss time, but more significant is the loss of student achievement (Andrew 2009; Carroll & Foster, 2010; Darling-Hammond, 2003; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2002; Sawchuk, 2015).

Students from lower socio-economic schools receive an un-equal chance to be prepared to compete with students from richer socio-economic schools. These students will not learn about the deficiencies until they compete for a job and/or attend technical and/or the traditional college. Under educated students have a lot of catching up to do and it may never happen, since they have years of knowledge and skills to make-up. These students have inexperienced teachers year after year. Even if the teachers work as hard as they can, they just do not have the experience level of teachers with years of experience.

This paper makes argument and recommendation for education leadership to make changes. The achievement and success of students in schools now and the next generation are at stake. As educators, we have kept abreast of the issues of teacher retention and attrition for over a decade and this paper is a result of those efforts. The authors have completed extensive literature review of well-known authorities in the field. The authors were diligent to use primary sources and use triangulation as much as possible. In this work, we are sharing our current findings on why it is important to have an experience teacher in each classroom.

Teacher Churning
The teaching profession is the largest occupation workforce in the United States and turnover is high (Ingersoll & Merrill, 2012). When the largest workforce is losing between 40 to 50 % of the new teachers within five years there must be an explanation. Teacher turnover rates varies
based on a school’s location (urban or rural), racial composition, and free/reduced meal plans, retirement, quitting, part-time teaching, but the leading cause is teacher dissatisfaction or to pursue another job. Nearly one thousand teachers leave the profession every day and another thousand change schools in hopes of better working conditions (Alliance for Excellent Education 2005; Shockley, Guglielmino, & Watlington, 2006). Phillips (2015) found nearly 50% of the new teachers will try to transfer to another school or leave the profession within five years. Nearly 540,000 teachers moved to other schools or left the profession in 2000 due to the feeling of isolation (Carroll & Fulton, 2004). Every year teachers transfer in and out of low performing schools trying to find a better environment to teach in or they give up and quit, especially the brightest ones are more likely to leave (Ibid). It is not that they do not want to teach, it is because of issues beyond their control, such as incompetent and unsupportive administrators, bully teachers, unsupportive and uninvolved parents/guardians, and a cultural environment mismatch.

Students and teachers are excited as they begin the new school year and then something changes over the first few weeks. The environment is out of control. Everyone is just surviving. New teachers’ hear, if you can make it through the first year, you can make through the next. Teachers should not be expected to be martyrs. Teachers are professionals with a university degree and state licenses/certifications. Teachers should have a great first year experience and eagerly wait for the next new school year. They have invested years of education, money, and time. We cannot blame the teachers for wanting to work in a better work environment with greater resources and better leadership. Unfortunately, many new and inexperienced teachers are churned each year (Sawchuk, 2016). There are good schools in lower socio-economic environments, but they are not the norm.

**Teaching Experience Matters**

It is a misnomer that teaching experience over ten years does not lead to greater student achievement. The analogy used is similar to a medical doctor. Would you expect the medical doctor’s skill and expertise to not have an effect on the health treatment of a person after ten years of practicing in their medical field? Of course not, the same is for the experienced school teacher in the classroom. Students benefit by having an experienced in their classroom (Sawchuk, 2015).

Current retention and attrition statistics do not reflect the reality of what is going on in the schools. Previous data showed twenty percent of the new teachers leave during the first year (Fuller, 2002 in Gonzalez, Stallone-Brown, Slate, 2003) and between 30 to 50% of new teachers leave the profession within five years (Alliance for Excellent Education 2005; Darling-Hammond, 1998; Planty, et al., 2009; Watlington, Shockley, Guglielmino, 2010; Abdalish, 2009). Now, many school districts require teachers to sign two or three-year contracts. Why do schools require teachers to sign a contract? Because research shows students in schools with inexperienced teachers year after year fall behind in student achievement. If the school can keep teachers in the same position at the same school, gaining teaching experience, the greater the likelihood students will have higher achievement. Incredulous as it may seem, some school principals actually encourage turnover, because new teachers can be hired for less money (Phillips, 2015).

Why do new teachers accept positions in the lower socioeconomic schools? They need money to survive just like anyone else and will accept a position in a low performing school. More jobs are available in the low-performing schools. The environment for the students and teachers alike in a low performing socio-economic school is a tough place to thrive or as a lay person might say, ‘bad school.’ Many new teachers fresh out of college are placed in a culture
not familiar to them—and even considered hostile. The teacher’s lack of fit in a school’s culture is a factor contributing to the failure even though they had the same content preparation and experiences, and philosophy as other teachers (Yost 2006). Awareness of the school’s culture and knowing the realities of the workplace are both important (Kardos, Johnson, Peske, Kauffman & Lui, 2001). The realities of working in a bad school are a shock to a teacher with no life experiences in that culture. They are literally fish out of the water.

It’s not always students being unmanageable; it can be bully teachers manipulating the environment. There has always been a saying behind the scenes for new teacher, “stay out of the teacher’s lounge.” There is a reason for this, bully teachers have been under-minding schools for years with incompetent management, ganging up and terrifying new teachers. New teachers have feelings of hopelessness, since they can barely teach in a hostile work environment and no voice in decision making power (Phillips, 2015). Many of these teachers move to safer schools with fewer student discipline issues in order to stay in teaching (Johnson & Birkeland 2003).

Research shows students who have experienced teachers have higher student achievement and the opposite affect with new and inexperienced teacher (DeAngelis & Presley, 2007). Low performing schools with greater socio-economic disadvantaged students are proportionally even more disadvantaged with fewer experienced teachers. The newer teacher lacks on-the-job teaching experience yielding an unsatisfactory learning environment for the students year after year, which hurts the quality of the student’s education and achievement (Flynt & Collins, 2009). The impact is even more evident in schools classified as low performing, socio-economic disadvantaged and minority students, where teacher turnover is greater and attrition reaches 50%. (Watlington, Shockley, Guglielmino 2010; Planty et al., 2009).

These students suffer the most unequal education, lower standardized test scores, being unprepared for college rigor, and the lack of opportunity to learn skills for good jobs with more earning potential. In addition, they are doomed to instructional losses that cannot be regained (Sanders & Rivers, 1996). Student achievement is greater with an experienced teacher for example in math as shown on Figure 1. Teachers with experience were effective in improving student achievement well after the three to five-year mark. In fact, teacher experience between the 10th and 30th years improves student test scores by 40% in both math and reading (Sawchuk, 2015). In addition, teachers with greater than 15 through 35 years of teaching experience have greater student achievement than all teachers with 14 years and less experience.

An experienced teacher in the classroom matters and it makes sense. Most people would want an experienced M.D. with several years of practice rather than a first year intern diagnosing with nil medical work experience. We could choose to be optimistic and say the new teacher is just not prepared enough and needs more courses, more observation hours, more weeks or months of student teaching, more mentoring, etc., but the reality of the research on the new teacher and the academic effectiveness on student success is overwhelmingly they are not as good as the experienced teacher. Research shows the most important factor in a child’s education is the quality of the teacher and the teacher’s work experience (Chase, 2000).

The United States will need millions of new teachers over the next decades as the population grows, the baby boomer teachers retire, and with the low teacher retention and high teacher attrition trends (Gonzales, Stallone-Brown, Slate 2008; U.S. Department of Education, 2003; Planty et al., 2009). The forecast is 2.3 million to 4.5 million teachers will be needed between 2009-2020 (U. S. Census, 2012). Ingersoll (2010) estimated over 3 million new teachers would be needed by 2013 to meet the challenge of staffing schools. Teacher shortages in some states, such as California are putting thousands of underprepared teachers in low socio-economic
schools (Leal, 2017). This is not good news and contributes to teacher churning and chronically underperforming schools (Carroll & Foster 2010). Education experts agree millions of more teachers will be needed.

**Concluding Remarks**

These findings provide evidence to recognize the reality of the education system and the need for immediate changes in leadership to manage our schools to provide an equal education for all students. It is not fair for students in low-socio economic schools to receive an un-equal education, un-equal chance of higher achievement, to not be prepared for society, and to have less chance of success in life. Martin Luther King Jr. said “education is the great equalizer. Educators know this is correct (Roekel, 2011).

Carroll and Foster’s National Commission on Teaching and America’s Future report (2010) had recommendations to promote a comprehensive education workforce for the 21st century. New workforce policies should include state leadership coalitions focused on developing comprehensive 21st century education workforce plans that go beyond recruitment and replacement strategies; align retirement policies with workforce and educational goals; create systems to identify and assess veteran teachers who are effective and interested in continuing to work in education; and to create schools that respond to the 21st century demographic and workforce realities. Further, they recommend developing ‘Learning Studios’ that draw upon the skills and knowledge of professionals of all generations to create collaborative, cross generational learning organizations. They state “the achievement and success of the students of the next generation is the motivation.”

The reality of teaching in today’s classroom is challenging. Up to 50% of the new and inexperienced teachers leave each year. At risk students, low socio-economic students and minority students experience new and inexperienced teachers each year and fall further and further behind academically. As sad as these facts are, schools need to take the words of the late comedian, Joan Rivers, “Oh, grow up.” We need to correct these problems. Who wants their child to be educated in this environment?

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Figure 1 Student Achievement and Teachers’ Years of Experience

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**LONG-TERM GAINS**

North Carolina middle school math teachers’ ability to boost their students’ scores improved for more than a decade in the 2000s—not just in their first 3 to 5 years. (The tails for each point represent confidence intervals.)

**SOURCE:** National Center for Analysis of Longitudinal Data in Education Research

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**Education Week**

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43
Progress in Self-Efficacy for Female Engineering Students

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Abstract

As interest in increasing the involvement of women in science and engineering grows, it is necessary to identify perceived barriers to success in the fields. The present study assessed the levels of self-efficacy in male and female engineering students with the Longitudinal Assessment of Engineering Self-Efficacy Scale (LAESE) and a demographic questionnaire at a mid-size southern university. Results indicated that females reported significantly lower beliefs about their ability for mathematics as found on the Math Outcome Expectations subscale. Due to the significant role that mathematics plays in the career education and training for engineering, this finding is likely to impact women in their career development and decisions.

The National Science Foundation (2008) reports that women are consistently awarded fewer undergraduate degrees in engineering, technology, and science fields in the United States than their male counterparts (Hill, 1997). The need to attract, retain, and increase diverse student populations, including women and minorities, in engineering, technological, mathematical, and scientific (STEM) fields has been deemed as important by the Committee on Equal Opportunities in Science and Engineering (2004; Werner & Denner, 2009). In the United States, females represented only eleven percent of American engineers (Baker, Krause, Yaşar, Roberts, & Robinson-Kurpius, 2007) because the field of engineering has long been an area dominated by males (Robinson & McIlwee, 1989). Research has found that in the past decade, women receiving an engineering degree decreased in overall numbers (Rosser & Taylor, 2008). The number of women that received an engineering bachelor’s degree during the 2007 academic year was the lowest since 1996 (Jenniches & Didion, 2009). In 2006, women received 13,300 engineering undergraduate degrees, whereas 54,821 men graduated with engineering bachelor’s degrees (National Science Foundation, 2008). Research also has suggested that women are involved in less scientific research and science employment in the American and Canadian workforce. This number is disproportionate to the number of women employed in non-science fields (Lane, 1999). Shockingly, until 2005, women only comprised approximately five percent of the science faculty at Harvard and eight percent at MIT (Coyne, 2009).

The topic of imbalance in gender representation is an important issue that merits further examination. One possible explanation for the gender imbalance is lack of self-efficacy in female students studying in engineering departments. One factor of interest is gender support in the home environment (Papastergiou, 2008). Research has shown that parents often encourage boys to engage in science fields while females are not actively pushed to pursue math and science courses in school (Papastergiou, 2008; Sherman, 1988). Because math and science have been historically viewed as the territory of males, these fields may be particularly susceptible to influence by sex role expectations (Sherman, 1988). Because of the additional hurdle of opposing these expectations, self-confidence and self-efficacy beliefs in females may be additional detrimental factors to career choice.
Self-efficacy (Bandura, 1977; 1982; 1994; 1997; 2005) is defined as those beliefs that an individual has about their ability to perform certain tasks in order to accomplish specific, distinctive goals. Initially, the concept was termed self-beliefs (Bandura, 1977), but was later changed to the term self-efficacy. Bandura asserted that personal self-efficacy views influence how a person is motivated to achieve personal success and individual contentment (Bandura, 1986). A woman’s self-efficacy and self-confidence, which are beliefs held about one’s own abilities to perform specific tasks, may influence a young woman’s decision to pursue an education in the science, math or technological fields (Papastergiou, 2008). Self-efficacy has been identified as a job choice predictor (Dawes, Horan, & Hackett, 2000) because the higher levels of personal self-efficacy can increase job exploration and training in jobs that would have been otherwise unexplored (Dawes et al., 2000). Further, self-efficacy has been identified as a predictor of success for students in the field of engineering (Rittmayer & Beier, 2009), and has also been shown to be related to levels of determination, drive, level of interest, and achievements or success in students that intend on studying engineering as a career choice (Rittmayer & Beier, 2009; Schaefer, Epperson, & Nauta, 1997; Lent et al., 2003; Hackett, Betz, Casas, & Rocha-Singh, 1992). The low numbers of females in engineering has been ascribed to low self-efficacy feelings (American Association of University Women, 2008; Hyde, Fennema, & Ryan, 1990) regarding personal capabilities in skills that are necessary to be an engineer (Dawes et al., 2000; Rittmayer & Beier, 2009; Schunk & Pajares, 2002). 

Career self-efficacy was initially created as a measure of occupational and career preparation for females in jobs that were dominated by men (Hackett & Betz, 1981). Because engineering was a male-dominated occupation (Humphreys, 1982; Pfafflin, 1984; National Science Foundation, 1984), the initial research began in the identification of discrepancies between jobs that employed mainly men, including engineering, mathematics, and science (Hackett & Betz, 1981). The initial research was also used to identify areas that women suffer from low self-beliefs about their individual abilities and skills for certain careers (Hackett & Betz, 1981; Fitzgerald & Crites, 1980; Farmer, 1976). Research on career self-efficacy eventually came to include general occupational training and development as well as specific job progress for certain groups (Betz & Hackett, 2006). The term career self-efficacy was coined as a means to name the self-efficacy expectancies and opportunities that lead an individual to choose a job or occupation (Betz & Hackett, 1986). The research focused on determining essential components of occupational activities and performance, including the ability to perform and persevere in job pursuits (Betz & Hackett, 1986).

The theory of self-efficacy was initiated by Albert Bandura in 1977. Bandura defines self-efficacy to be “the conviction that one can successfully execute the behavior required to produce outcomes” (1977, p. 193). Self-efficacy can also be defined as the individual beliefs that a person has regarding their capabilities for performing in events that influence their lives (Bandura, 1994). Self-efficacy theory is further explained as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). Bandura asserts that personal self-efficacy beliefs will establish individual personal feelings, thoughts, motivations, and behaviors (Bandura, 1994). Beliefs about personal self-efficacy supply the basis for individual motives, achievement, and personal happiness, safety, interests, and comfort (Bandura, 1986).

Bandura (1994) posits having healthy and positive self-efficacy beliefs can augment individual achievement and welfare in a variety of instances. The theory of self-efficacy theorizes that behavior and emotional modification will arise because of the altering of a person’s own beliefs regarding their proficiency or efficacy (Bandura, 1977, 1982, 1986). Bandura (1977, 1982) proposes that self-efficacy is capable of mediating behavioral modifications using cognitions. Human functioning is influenced by the personal self-efficacy beliefs in that “people’s level of motivation, affective states, and actions are based more on what they believe than on what is objectively true” (Bandura, 1997, p. 2). The behaviors exhibited by an individual are often the result of their beliefs about their personal capabilities as opposed to their actual aptitudes and competences (Pajares, 2002). This is because the individual personal perceptions of self-efficacy often influence how a person utilizes the information, facts, and abilities that they possess (Pajares, 2002). Understanding the significance of self-efficacy beliefs aids in understanding
how some people’s actual performance or behaviors are vastly different from their actual capabilities or skills (Pajares, 2002). Prediction of individual achievement for success is improved by examining the personal self-efficacy beliefs of the person as opposed to their past accomplishments, success, education or knowledge, aptitudes, or skillfulness (Pajares, 2002).

Self-efficacy theory suggests that an individual can demonstrate two different expectations regarding their ability to master or cope with situations or environments (Maddux & Stanley, 1986). First, the individual can exhibit “an outcome expectancy”, which is an idea that certain behaviors may or may not direct to a specific result or conclusion (p.250). The second expectation is called “a self-efficacy expectancy” (p. 250). The self-efficacy expectancy is an individual’s conviction that they are or are not competent to achieve or execute a necessary action or behaviors (Maddux & Stanley, 1986). Self-efficacy expectancy is believed to be the most significant in impacting how behaviors are initiated as well as the perseverance and determination when an individual is feeling frustrated or has fears of failing. Additionally, instruments used to assess self-efficacy expectancies are considered to be good at predicting the beginning of initiating of behaviors and diligence at pursuing the behaviors (Maddux & Stanley, 1986).

Self-efficacy has been identified as a predictor for occupational investigation and educational training for students (Dawes et al., 2000). Therefore, having lower feelings of self-efficacy can limit exploring certain jobs and training (Dawes et al., 2000) Research in the field of engineering has identified self-efficacy to be significant as a predictor for student success (Rittmayer & Beier, 2009). Studies have acknowledged that self-efficacy is a significant variable for students studying to be engineers, specifically for their diligence and determination, interest levels, and success and accomplishments (Schaefers et al., 1997; Hackett et al., 1992; Lent et al., 2003) Students identified as being high in self-efficacy are typically more driven to be successful and more likely to attain personal objectives or goals, such as making higher grades to attain success (Bandura, 1997; Lynch, 2010).

Marra and Bogue (2007) found a significant correlation between the variables of self-efficacy and perseverance for both males and females. High self-efficacy levels in students are indicative of having motivation to put forth exertion to attain their target objectives (Bandura, 1997; Lynch, 2006). In addition, students with high levels of self-efficacy are more likely to demonstrate resilience when facing problems in their educational studies (Bandura, 1997). Research has identified that students with high self-efficacy regarding their ability to be an engineer are more likely to persevere with their studies than are students that have low self-efficacy regarding engineering (Britner & Pajares, 2006). These students with high self-efficacy regarding engineering have also have been found to be improved performers than individuals with low self-efficacy for engineering (Britner & Pajares, 2006). Because self-efficacy can be a predictor of scholastic and intellectual performance that is actually higher than an individual’s actual abilities or past success and accomplishments (Bandura, 1997), having high feelings of self-efficacy regarding engineering can be a predictor of being a successful engineer (Rittmayer & Beier, 2009).

The “gender gap” (Rittmayer & Beier, 2009, p. 1) in engineering has been attributed to personal self-efficacy levels (AAUW, 2008). Past studies have identified that self-efficacy regarding capabilities as an engineer, or other science, technology, or mathematics (STEM) fields, exhibit significant gender discrepancies (Dawes et al., 2000; Schunk & Pajares, 2002; Rittmayer & Beier, 2009). This research has also identified that those individuals with high self-efficacy regarding their abilities as an engineer will likely be more successful in the field of engineering and other STEM fields (Rittmayer & Beier, 2009; Schunk & Pajares, 2002). The term of “confidence gap” has been created as an explanation for the gender differences in self-efficacy perceptions for engineering and other STEM fields (Sadker & Sadker, 1994, as cited by Rittmayer & Beier, 2009). According to research, the “confidence gap” is in existence between males and females, even though there are often similar achievements, including academic performance (Pajares, 2005; Watt, 2006). One study hypothesized that the fewer numbers of females and minority individuals in engineering and scientific fields can be directly linked to having lower amounts of perceived self-efficacy (Hyde et al., 1990).

Past research has examined the connection between self-efficacy and the field of engineering and other STEM disciplines. Male college students were found to be more self-efficacious regarding their abilities
in math than females (Lent, Lopez, & Bieschke, 1991; O'Brien, Martinez-Pons, & Kopala, 1999; Hackett & Campbell, 1987). This significantly contributed to their consideration of a career that would utilize mathematics and science abilities (Lent et al., 1991; Post, Stewart, & Smith, 1991; Hackett & Betz, 1989; Hackett & Campbell, 1987). Males were also determined to have increased self-efficacy for mathematical abilities and better math training, which was directly influential on their personal self-efficacy beliefs for jobs in science and their interest in a career that was associated with science (Lapan, Boggs, & Morrill, 1989). In a related study, eighth grade male students were identified as being more likely to continue into careers in engineering or science fields than females (Mau, 2003). Math self-efficacy was considered one of the most significant predictors of persisting into an occupation in either engineering or science (Mau, 2003). Mathematics has been identified as a “critical filter” that often prepares or eliminates students interested in engineering or other STEM fields as occupations (Betz & Hackett, 1983; Dawes et al., 2000).

Beliefs regarding self-efficacy for both men and women students studying engineering identified factors such as being understood, gaining knowledge in their education, and being helped as more significant for females than males (Hutchison, Follman, Sumpter, & Bodner, 2006). Males and females both stated that being compared on their performances had a significant bearing on their individual self-efficacy feelings; however, the consequence was considered to be a positive experience for males, while females reported the experience to be a negative event (Hutchison-Green, Follman, & Bodner, 2008).

A significant relationship between the amount of faculty contact and communication with self-efficacy was found in another research study (Vogt, 2008). The research examined 713 students in the field of engineering and learned that self-efficacy, self-confidence, and accomplishment were significantly related to the level and quantity of faculty interactions (Vogt, 2008). Another study found that challenges such as feelings of being included and fitting into the engineering program were detrimental to self-efficacy for female engineering students (Marra, Rodgers, Shen, & Bogue, 2009). Self-efficacy can be considered a significant contributor for influencing occupational interests (Dawes et al., 2000). Because engineering and other technological fields utilize skills and ability in both mathematics (Dawes et al., 2000; Betz & Hackett, 1983) and science (Andre, Whigham, Hendrickson, & Chambers, 1999), self-efficacy is a noteworthy indication for success as an engineer or in the engineering field (Rittmayer & Beier, 2009).

Interventions to improve the self-efficacy of students studying engineering have been devised and executed (Jones, Paretti, Hein, & Knott, 2010). One method to improve self-efficacy for engineering and other STEM related fields is to increase and expand performance outcomes (Rittmayer & Beier, 2009). This can be accomplished through improving mastery experiences as they are important for predicting self-efficacy levels (Britner & Pajares, 2006; Bandura, 1997). Ways to improve mastery experiences include structuring activities to comprise “proximal goals” (p. 2) and maximizing the mastery experience by giving information and encouraging the student in order to assist them with enhancing self-efficacy (Rittmayer & Beier, 2009). Another way to improve the mastery experience is by incorporating assignments that are hands-on into the class curriculums and adding activities to improve their ability to self-regulate (Rittmayer & Beier, 2009). Finally, Rittmayer and Beier suggest that class assignments should be a challenge to the student; however, the assignments should not be unworkable (2009).

Another way to improve self-efficacy is through the use of vicarious experiences as a performance outcome (Rittmayer & Beier, 2009). Role models are an important way to provide vicarious learning experiences (Rittmayer & Beier, 2009), particularly when the student perceives a similarity between the role model and their own self. One way, according to Rittmayer and Beier, is to provide invitations to superior engineering students and professionals into the classroom (2009). This allows the students to work with advanced engineering professionals or other students to enhance vicarious learning. Another way to encourage vicarious experiences is through assigning group tasks to a group of students with similar abilities (Rittmayer & Beier, 2009). Self-efficacy is improved when a student is able to examine and study the success of prominent and important others, especially with female students (Zeldin & Pajares, 2000).

Social persuasion can be another way to improve performance outcomes, and thereby, improve self-efficacy for students. Providing helpful encouraging comments or feedback to students, particularly when
provided by a prominent individual, such as teachers or parents, can increase self-efficacy (Rittmayer & Beier, 2009). Positive encouragement and advice is most valuable when the student has abilities and some self-confidence in those abilities, and believes that they can achieve personal accomplishment. Female self-efficacy is particularly susceptible to improvement through the use of social persuasion (Zeldin & Pajares, 2000). Ways to improve self-efficacy for engineering students through the inclusion of social persuasion include providing comments and encouragement that is real, constructive, helpful, and suitable because students recognize fake acclaim (Rittmayer & Beier, 2009). Being successful as an engineer requires being effortful, therefore, provide encouragement to students to persevere even when there are problems or difficulty (Rittmayer & Beier, 2009). Another way is to ask the parent of a student to being supportive of the student’s interest in engineering; this is especially important for females. Additionally, provide education regarding how important engineering and other STEM fields are to students and their families (Rittmayer & Beier, 2009). It is important to especially point out that engineering is not a career for only men-instead, women and girls are valuable as engineers as well. This can be done through the incorporation of additional and supplementary engineering events and activities (Rittmayer & Beier, 2009).

Engineering self-efficacy is further affected by the performance outcome of physiological reactions (Rittmayer & Beier, 2009). The self-efficacy of a person is influenced by their understanding of their emotions and bodily conditions, or physical states, when preparing for tasks and during their presentation or function (Rittmayer & Beier, 2009). Improved self-efficacy is a result of calmness and composure as opposed to feelings of nervousness or worry during task performance. To reduce anxiousness or apprehensive feelings, instructors can talk about the anxiety that is related to mathematics and science with students, and also explain to the student that they are capable of controlling their physiological responses (Rittmayer & Beier, 2009). Additionally, teaching students to incorporate techniques to reduce anxiety, including deep breathing and learning to visualize as a skill, are effective. Also effective is to teach students how to practice relaxing as an anxiety-reducing ability (Rittmayer & Beier, 2009). Finally, the instructor can provide encouragement to the student to pay attention and focus on their required tasks as a means to decrease fear and apprehension, which will improve anxiety about assignments and projects (Rittmayer & Beier, 2009).

The current study was conducted to determine if overall self-efficacy was significantly different between male and female engineering students. The Longitudinal Assessment of Engineering Self-Efficacy Scale (LAESE) was used to measure self-efficacy for engineering on a multidimensional level (Assessing Women and Men in Engineering, 2011) including career success expectations, engineering self-efficacy I, engineering self-efficacy II, feeling of inclusion, coping self-efficacy, and math outcome expectations. It was hypothesized that female engineering students would demonstrate significantly lower feelings of self-efficacy than male engineering students.

**Method**

**Participants**

Participants were student volunteers enrolled in undergraduate engineering classes at a mid-size southern university. From an initial sample of 250 participants, data were retained for analysis from the 220 participants who fully completed the survey. Of the 220 participants, there were 158 males and 62 females. The age of participants ranged from 17 to 38 years old (M = 20.75, SD = 3.64). The ethnicity of the sample was of 167 Caucasians (75.9%), 28 African-Americans (12.7%), seven Asian-Americans (3.2%), four Latino/Latina Americans (1.8%), two Native American (0.9%), and 11 Others (5%) who did not include their ethnic backgrounds. One participant (0.5%) did not include any response to the ethnicity question.

**Male Participants.** The male participants comprised 71.8 percent of the research sample. Male participants ranged in age from 17 to 38 years old (M = 21.07, SD = 3.83). For the males, 124 were Caucasian (78.5%), 20 were African-Americans (12.7%), four were Asian-American (2.5%), two were Native Americans (1.3%), one was Latino (0.6%), and six identified as Other (3.8%). One male did not
indicate his ethnicity (0.6%). The male participants included 48 freshmen (30.4%), 29 sophomores (18.3%), 39 juniors (24.7%), 39 seniors (24.7%), and three who did not answer the question (1.9%).

Female Participants. The female participants ranged in age from 18 years to 26 years old (M = 20.25, SD = 1.85). There were 43 Caucasian participants (69.4%) who comprised the majority of the female sample. The other ethnicities identified were eight African-Americans (12.9%), three Asian-Americans (4.8%), three Latinas (4.8%), and five who identified as Other (8.1%). The female participants included 17 freshmen (27.4%), 18 sophomores (29%), ten juniors (16.2%), and 17 seniors (27.4%).

Materials

Demographic questionnaire. The demographic questionnaire consisted of seven items designed to gather data on standard demographic information of the participants. The demographic questionnaire included questions such as current age, sex/gender, ethnicity/race, and current educational level. Additionally, the grade point average (GPA) was asked of each participant. The demographic questionnaire also asked questions regarding sexual orientation and current relationship status to gather data for the present study.

Longitudinal Assessment of Engineering Self-efficacy. The LAESE is a longitudinal measure of self-efficacy for engineering undergraduate students (AWE, 2011). The LAESE has items that identify several aspects of self-efficacy. The instrument is a means to categorize how role models are influential on how students learn and make choices about their occupations and career choices (AWE, 2011). The LAESE was created as a way to determine the changes in self-efficacy for engineering male and female undergraduate students (AWE, 2011). The LAESE has been assessed and validated for the use with men and women engineering students (AWE, 2011).

The LAESE is comprised of roughly 60-survey items and typically requires about 15-minutes for completion (AWE, 2011). Items on the LAESE focus on the assessment of self-efficacy, confidence levels, and expectancies regarding outcome, which are all variable influential in successfully being an engineer major (AWE, 2011). The survey includes questions to identify the engineering participant ways of managing when faced with hard, complicated, or problematic situations. The survey also provides a means to determine the participant’s self-belief and self-confidence in performance in crucial educational and scholastic endeavors (AWE, 2011). The subscales are comprised of items that measure self-efficacy, the personal sense of belonging or feeling included, and the expectancies for outcomes. The LAESE has six subscales, which are (1) engineering career success expectations, (2) engineering self-efficacy I, (3) engineering self-efficacy II, (4) feeling of inclusion, (5) coping self-efficacy, and (6) math outcome expectations. Each of the subscales has been analyzed and tested for reliability using the Cronbach’s alpha. The reliability of an instrument or subscale of an instrument is considered to be acceptable if in the range between .70 and .90 (AWE, 2011). The LAESE has internal consistency, as determined by overall Cronbach’s Alpha of reliability that ranges from .73 to .84. The six subscales of the LAESE have Cronbach’s alpha scores ranging from .73 (Feeling of Inclusion subscale) to .84, which was determined to be in the two separate subscales of engineering career success expectations and math outcome expectations.

Procedure

The researcher provided the research questionnaires to those student participants in each classroom that choose to participate in the study. Participants were informed that individual responses would be collectively reported in a group format. Each participant was asked to answer the LAESE and demographics survey. The participants were then asked to return with their completed questionnaire at the next class session. The primary researcher was present at the next class session to retrieve the completed questionnaires from the student volunteers.

Results

Self-efficacy was analyzed using multivariate analysis of variance (MANOVA) on data from the Longitudinal Assessment of Engineering Self-Efficacy scale. Results indicated significant gender differences in the math expectations outcome subscale, \( F(1, 213) = 4.88, p < .05 \). ANOVA was used to
analyze each subscale of the Longitudinal Assessment of Engineering Self-Efficacy. The sum of squares, mean squares, degrees of freedom, and F ratios for ANOVA can be seen in Table 1. The subscales for the Longitudinal Assessment of Engineering Self-Efficacy (AWE, 2011) for the current study were determined to have internal consistencies from 0.41 to 0.83.

Results of the ANOVA indicated that female engineering students were significantly more likely to experience concern about their mathematical skills ($F(1, 214) = 10.67$, $p < .05$), than their male counterparts. Female students did not report more concern about their future careers in engineering ($F(1, 203) = .05$, $p = .82$, $ns$), fears regarding their self-beliefs about their future achievement in engineering ($F(1, 109) = 1.42$, $p = .24$, $ns$), lower beliefs about their skills or capabilities as a future engineer ($F(1, 193) = .19$, $p = .66$, $ns$) when compared to their male counterparts.

**Discussion**

The present study aimed to determine gender differences regarding self-efficacy amongst engineering students. Results indicated that female engineering students typically are not as confident in their mathematical skills as their male counterparts, who are also studying engineering.

In the past, one notable reason for lack of women as engineers was the difference in secondary school promotion of high school mathematics and science. Recent enrollment for females taking high school classes in the mathematics and science fields has increased (Baker et al., 2007). The classes of engineering, physics, algebra II, chemistry, geometry, biology, trigonometry, pre-calculus, and calculus have begun to demonstrate a smaller gap in male-to-female ratios than past enrollment numbers (Baker et al., 2007). Unfortunately, the higher enrollment numbers of females in science and mathematics courses has not increased the overall percentage of women interested in majoring in engineering and science fields since 1977 (National Science Board, 2004). Another argument to explain the lower numbers of women choosing engineering as a career is that stereotypes continue to exist in our society. Students as young as age five years have expressed belief that careers in science and mathematics are jobs only for men (Andre et al., 1999).

Past research has examined the connection between self-efficacy and the field of engineering and other STEM disciplines. Male college students were found to be more self-efficacious regarding their abilities in math than females (Lent et al., 1991; O’Brien et al., 1999; Hackett & Campbell, 1987). This significantly contributed to their consideration of a career that would utilize mathematics and science abilities (Lent et al., 1991; Post, Stewart, & Smith, 1991; Hackett & Betz, 1989; Hackett & Campbell, 1987). Males were also determined to have increased self-efficacy for mathematical abilities and better math training, which was directly influential on their personal self-efficacy beliefs for jobs in science and their interest in a career that was associated with science (Lapan et al., 1989). In a related study, eighth grade male students were identified as being more likely to continue into careers in engineering or science fields than females (Mau, 2003). Math self-efficacy was considered one of the most significant predictors of persisting into an occupation in either engineering or science (Mau, 2003). Mathematics has been identified as a “critical filter” that often prepares or eliminates students interested in engineering or other STEM fields as occupations (Betz & Hackett, 1983; Dawes et al., 2000).

Our findings also indicated female engineering students may be less likely than males to value their own skills and abilities, specifically within the discipline of mathematics. Female engineering students are more likely to experience concern that they are not as skilled in mathematics, which are necessary for studying within the engineering field. Previous studies have indicated that females are susceptible to feelings of low self-esteem and low self-worth regarding their personal abilities and skills, which influence their feelings regarding a career in engineering or other science and math fields (AWE, 2008; Papastergiou, 2008; Dawes et al., 2000; Hyde et al., 1990). Past studies have also identified that having feelings of low self-efficacy were significantly related to fearing failure or being unsuccessful in the field of engineering (Sherman, 1988; Elliot & Sheldon, 1997; Martin, 2002).
The present study identified that females are more likely to devalue their own skills and capabilities for the field of mathematics. This finding correlates strongly with past research that also identified women are at risk for low feelings of self-efficacy for mathematics (Lent et al., 1991; O’Brien et al., 1999; Hackett & Campbell, 1987). However, the current findings did not indicate that female students have lower expectations about their future careers as an engineer and have lower beliefs about their success in the engineering field. It is possible that women in engineering are become more visible with the increased interest in identifying women in traditionally STEM (science, technology, engineering, mathematics) fields, which has assisted female students studying to be engineers in being more hopeful about their success and future career goals in engineering. Additionally, females did not have lower beliefs about their ability to cope with difficulties than their male counterparts. Possibly, the reason for this finding is that females are identifying outside sources to assist with coping when faced with problems, either related to engineering or completely unrelated to engineering. Thus, having a significant support network is hopefully assisting the female students in coping when faced with difficulties. Finally, females in this study did not report feelings of exclusion from the group. This is possibly due to the efforts of faculty and male counterparts assisting with including females to assist with cohesion and group unity. Feeling as though they are a part of the group within the engineering field can only assist females in feeling as though they are being supported and unified with peers.

The current study was conducted with male and female engineering students at a single mid-sized southern university. There may be significantly different attitudes across locations and university size. It would be beneficial to have studies done at varying locations. The majority of the sample was male (71.8%) which may have affected the analysis. Although engineering is a male-dominated field, it would be useful for future research to include more female participants in their study. Also, a large majority of our sample was Caucasian (75.9%). Future studies may want to focus on a more diverse sample of students in order to assess if differences in ethnicity are also playing a part in the fear of failure in addition to gender.

One suggestion for future research would be to assess the self-efficacy in males and females currently employed in the field of engineering. These findings could be compared to self-efficacy levels while pursuing an education in engineering versus self-efficacy levels after entering the workforce. Females might experience significantly different results regarding self-efficacy after they have completed school and have a job within the field. It remains important to investigate self-efficacy and related constructs such as self-confidence and self-esteem in this population.

References


Hill, S. T. (1997, November 7). Science and engineering bachelor’s degrees awarded to women increase overall, but decline in several fields. *National Science Foundation, 52*


Table 1
Analysis of Variance (ANOVA) for Self-Efficacy Hypotheses
Longitudinal Assessment of Engineering Self-Efficacy

<table>
<thead>
<tr>
<th>Variable</th>
<th>$F$</th>
<th>$df$</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSE</td>
<td>10.67</td>
<td>(1, 214)</td>
<td>326.99</td>
<td>326.99</td>
<td>.00</td>
</tr>
<tr>
<td>SE-I</td>
<td>23.44</td>
<td>(1, 215)</td>
<td>293.46</td>
<td>293.46</td>
<td>.00</td>
</tr>
<tr>
<td>SE-II</td>
<td>7.34</td>
<td>(1, 215)</td>
<td>110.65</td>
<td>110.65</td>
<td>.01</td>
</tr>
<tr>
<td>FOI</td>
<td>.04</td>
<td>(1, 214)</td>
<td>.79</td>
<td>.79</td>
<td>.85</td>
</tr>
<tr>
<td>CSE</td>
<td>.14</td>
<td>(1, 213)</td>
<td>3.34</td>
<td>3.34</td>
<td>.71</td>
</tr>
<tr>
<td>MOE</td>
<td>.14</td>
<td>(1, 213)</td>
<td>3.34</td>
<td>3.34</td>
<td>.71</td>
</tr>
</tbody>
</table>

ECSE = Engineering Career Success Expectations; SE-I = Self-Efficacy I; SE-II = Self-Efficacy II; FOI = Feeling of Inclusion; CSE = Coping Self-Efficacy; MOE = Math Outcome Expectations

Note: $F$ = F ratio of ANOVA; $df$ = degrees of freedom; $p$ = probability
Departmental Major Program Assessment: Essential Ingredients of the Recipe in a Small Department

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INTRODUCTION

Over the past several decades, assessment has become a very common fixture of the environment at most colleges and universities. In the 1980’s and 1990’s, the government and higher education accreditation bodies expressed heightened concerns regarding the quality of learning in higher educational environments. Over time, the heightened interest in student learning outcomes and program effectiveness led to increased assessment requirements being placed on academic programs by accreditation bodies (see McClellan, 2009). Essentially, there is now general recognition that sound assessment practices in academic departments are warranted in order to both measure student learning and to evaluate the overall quality of academic programs.

In light of the proliferation of assessment requirements facing institutions of higher learning, these institutions continuously face challenging assessment requirements with which to contend. Given the expectations regarding academic major program assessment in particular, faculty members face the challenges of formulating assessment plans, implementing assessment plans, and applying the results of assessment plans to improve both student learning and program curricula. The process of academic assessment can easily be perceived as an extremely daunting one, especially to those faculty who carry out the assessment. Assessment requirements can easily elicit negative reactions due to various factors such as the lack of (or perception of the lack of) time to do the assessment, a lack of expertise and resources to assist with assessment procedures, concern over the implications of the assessment results, and a lack of incentives for participating in the assessment process.

This paper focuses on some of the essential ingredients of the major program assessment process of a small Political Science department at a relatively small liberal arts university. I focus on how the department manages its program assessment tasks from my perspective as the department’s assessment coordinator. First, I outline the major steps in the cycle of the department’s major program assessment. Then, I discuss and analyze the essential ingredients of the process by which departmental faculty conduct major program assessment. In this discussion, I emphasize how these essential ingredients address some of the common fears and obstacles that faculty members face when dealing with assessment.

This paper focuses neither on the actual assessment methods themselves nor on the results of those assessment methods. Instead, the main intent is to highlight some valuable ingredients of the process of formulating, implementing, and applying the results of the major program. The ingredients of the department’s assessment recipe have positively facilitated the procedure. In the Political Science scholarship of teaching and learning, there has been a significant increase in the attention given to assessment in recent years. Some research has focused on assessing student learning across various learning environments (e.g., Bengston & Sifferd, 2010; Donahue and Ishiyama, 2009; Huerta, 2009; Pollock, Hamann, & Wilson, 2009). Other assessment-related research in the field has examined the impact of various teaching activities on student learning (e.g., Baumann, Marchetti & Soltoff, 2015) and the usage of various mechanisms to assess student learning (e.g., Champney & Edelman 2010; Cohen, 2008; Gelbman 2011). The Political Science assessment literature has also given some attention to examining components of the process of departmental assessment (e.g., Deardorff, 2007; Deardorff and Folger, 2009; Deardorff and Posler, 2005; Smoller, 2004). However, much of the literature that has focused on approaches to program assessment has not done so in the context of very small academic
departments. Hence, this paper’s focus on a relatively small department’s process for executing assessment plans may be particularly helpful to other small academic departments as smaller departments have fewer faculty members to fulfill assessment tasks.

**THE STUDY**

**Department Description and Assessment Background**

This paper focuses on the assessment process of the Political Science Department at a relatively small teaching-oriented liberal arts university during a ten year time period which began in the 2006-2007 academic year. The normal teaching load for full-time faculty at the institution was twelve hours per semester. For most of the time period on which the paper focuses, the department consisted of three full-time faculty members. There were several faculty turnovers during this time which resulted in changes regarding the actual three individuals who were among the three full-time faculty. The number of Political Science majors fluctuated between approximately forty and over seventy-five students across the ten-year span. The University’s student population ranged anywhere between a little over two thousand and fewer than three thousand students during this time period. During the 2006-2007 academic year, the University required that each academic department’s major program designate a faculty member as an assessment coordinator. The assessment coordinator’s main responsibilities were to (1) collect assessment data from other faculty members in the department and (2) work with other departmental faculty in either revising the major program assessment plan or developing a new major program assessment plan. I was assigned the role of assessment coordinator for the Political Science major program during the 2006-2007 academic year, and have remained in that position through the present time. The designation of an assessment coordinator is in line with the suggestion that designating someone as an initiator in the assessment process is crucial for building a culture of assessment (Hill and Pastors, 2009; Smoller, 2004).

**Major Program Assessment Process Outline**

In this section, I provide a brief outline of the major steps of the assessment cycle that are usually employed by the department. At the beginning of the fall semester—before classes begin—the department has a lengthy, formal assessment meeting, which is chaired by the departmental assessment coordinator. At this meeting, the department’s major program assessment plan for the academic year (which would have been either formulated or revised at the end of the previous academic year), is reviewed and modified if needed. The meeting offers clarification to faculty members on what assessment-related activities they need to perform (usually in their respective courses) throughout the academic year so that they can plan accordingly. Throughout the fall semester, departmental faculty periodically consult each other and meet informally (and occasionally formally) pertaining to assessment-related issues for matters of clarification and to address unforeseen issues.

During the spring semester, departmental faculty continue to gather assessment data, perform assessment-related tasks, and meet informally when needed. At the end of the semester, after final grades have been turned in, a rather lengthy, formal assessment meeting is held. This meeting is chaired by the departmental assessment coordinator. The departmental assessment coordinator sends out (usually via email and in person) a reminder to program faculty regarding what assessment information they will be required to produce at the upcoming end of the semester assessment meeting. At this meeting, departmental faculty report their assessment data from the academic year, review the results, propose modifications to the assessment plan, and propose changes to the major program in response to the assessment results if necessary. Shortly thereafter, a rather detailed report on major program assessment is completed by the assessment coordinator with the assistance of other program faculty. During selected years (as determined by the Office of Institutional Effectiveness), the department submits this report to the University’s Office of Assessment and Institutional Effectiveness. If there are any significant revisions to the assessment procedures suggested by the Office of Assessment and Institutional Effectiveness, program faculty address these suggestions at additional assessment meetings.
DISCUSSION: ESSENTIAL INGREDIENTS OF THE MAJOR PROGRAM ASSESSMENT

RECIPE

“Set-Aside” Times for Assessment Meetings

A seemingly basic, yet very important ingredient to successfully completing the departmental major assessment program is using “set-aside” time periods in which departmental faculty can actively work on matters related to the assessment plan. Periods of time in which faculty are not consumed with all of their normal responsibilities allow them to intensely focus on assessment (Deardorff & Folger, 2005). These “set-aside” meeting times—at the beginning and end of the academic year—help to ensure that all program faculty members will be available to attend and actively participate in the meetings. Faculty also need a span of time that they can set aside for completing any assessment “homework” such as compiling assessment data from the previous academic year or coming up with recommendations for improving student learning based on previous results. During most of the time period covered in this paper, our institution provided a significant period of time (usually from one to two weeks) at the beginning and end of the academic year during which faculty were under contract but no classes were being held. During these time periods, faculty members are encouraged to prepare for classes, attend faculty training workshops, attend committee meetings, complete syllabi, and engage in other work-related activities. Taking advantage of this time to work on assessment matters helps to alleviate some of the anxiety associated with not having sufficient time to do major work on assessment during the heart of the semester when faculty are responsible for completing an array of other tasks. Using the set-aside meeting times wisely regarding working on the assessment program also potentially minimizes the number of lengthy assessment meetings that will need to occur during the academic year.

Strategically—Scheduled Assessment Meetings

In addition to the importance of having “set aside” periods of time within which to work on assessment plans, it is also crucial to schedule assessment meetings at strategic points in time that will optimize the chances of thoroughly executing the assessment plan and applying information learned from the plan. This is particularly important to bear in mind given that studies of assessment in Political Science departments indicate that while many departments perform assessment (Kelly and Klunk, 2003), many of them fail to actually apply their assessment results to departmental curricula (see Young, Cartwright, & Rudy, 2014). The strategically scheduled meetings work as an incentive for departmental faculty to go beyond merely going through the motions of assessment but to actually use the results to try to impact student learning. For example, a major assessment meeting in which data from the academic year is reported and evaluated is best held at the end of the spring semester of that academic year. At that point, faculty are in a good position to determine what modifications (if any) based on the assessment data need to be made to either the assessment plan itself or to the major program requirements for the upcoming academic year. In this scenario, program faculty will have the summer to prepare for any predicted changes as they prepare classes for the upcoming academic year. While having strategically—scheduled assessment meetings may seem like merely common sense, it is all too easy for faculty to get hyper-focused on their myriad of responsibilities and neglect to plan assessment meetings at optimal times.

“Culture of Collegiality” Among Departmental Faculty

One of the most essential ingredients of our approach to successfully coordinating major program assessment is the highly collegial relationship which exists among departmental faculty. A highly collegial relationship among faculty had already existed prior to when the department began working on the major program assessment plan. The considerable levels of trust and support that exist among faculty permit them to work as a team to address various matters pertaining to teaching, service, and research. Departmental members are quite comfortable seeking each other’s advice and assisting one another on work-related matters.

This “culture of collegiality” continued through three different combinations of departmental faculty members. Just as importantly, this “culture of collegiality” carried over into the context of the major program assessment project. High trust levels among faculty subsequently contribute to the willingness of departmental faculty to “buy in” to assessment concept (e.g., Deardorff, 2005; Deardorff and Folger,
Coordinating major program assessment requires the willingness of program faculty to perform activities that include completing various types of assessment-related “homework,” actively participating in a series of assessment meetings (both scheduled and as-needed) and providing thoughtful and substantive feedback on assessment-related issues throughout the academic year. Having departmental faculty members who have such high levels of respect and trust for each other facilitates the faculty’s willingness to work together as a team to complete the common goal of major program assessment. This observation is consistent with previous research findings which stress the important role of trust among faculty members in developing successful assessment programs (Angelo, 1999).

Facilitation of an Environment Which Invites Contributions to Program Assessment Planning

Another essential ingredient to successfully completing the departmental assessment plan is the facilitation of an environment which welcomes and encourages contributions and input from faculty members. Faculty involvement in the assessment process is believed to be crucial to implementing successful assessment programs (Muffo, 2001; Schilling & Schilling, 1998). When an individual faculty member is given a significant task from the assessment plan to perform, it can help the faculty member become more invested in and “buy-in” to the concept of departmental assessment (Deardorff, 2007). As departmental assessment coordinator, one of my responsibilities is to facilitate an environment in which other departmental faculty truly feel like they are essential parts of the assessment planning process. I do not define faculty involvement as having faculty merely complete whatever assessment tasks they are given. Instead, I communicate to them that their input and feedback is not only welcome, but also very necessary. Assessment endeavors tend to work more effectively when the atmosphere is a collaborative one (Cushman, 1996).

Given the small size of our department, each of the three full-time faculty members is in a good position to have unique insight into the classes that only he or she teaches. Such insight is invaluable when it comes to dealing with some components of the assessment plan. Periodically, each faculty member takes the lead when it comes to suggesting and discussing what skills students should be expected to acquire from assessments that are related to their courses. Research indicates that faculty enjoy having opportunities to participate in discussions with others that are related to assessment and other teaching and learning ideas (Angelo and Cross, 1993). The teamwork approach of making each of the program faculty members an instrumental part of the process at all stages is far more preferable to the approach of merely assigning faculty members with assessment duties and asking them do the work on their own time and then to report back with the results by a deadline.

Incentives for Faculty to Perform Assessment-Related Tasks

Given the already overloaded workload of most faculty members in general, many appreciate incentives to actively participate in assessment-related activities. In the context of a small department at a teaching-oriented school, attaining course release time for performing extensive and time consuming assessment work is often improbable. This is due in large part to the reality that a significant number of courses need to be taught by a very small number of faculty members. A study of Political Science departments revealed that a relatively small number of institutions provided course releases to faculty for performing significant assessment-related tasks (Kelly and Klunk, 2003). In our small department, we do not receive course releases for performing intensive departmental program assessment tasks. However, we do have several other types of incentives. One incentive is the actual requirement from our accreditation body and the administrative support that we actively engage in assessment practices. The University communicates to all departments that it is essential to the accreditation status of the school that all departments demonstrate that they actively engaged in assessing student learning.

Another incentive came from our departmental faculty. After going through the first couple of iterations of the assessment plan, faculty members proposed that we turn some of our assessment meetings into assessment and departmental meetings. This “dual meeting” structure allows both a forum and scheduled time during which other significant departmental issues can be discussed by all departmental faculty members. This modification encourages program faculty to be motivated to attend and actively participate in assessment meetings not just for the purpose of assessment, but also to discuss other important departmental issues that they felt need attention. Since most conversations pertaining to
assessment are closely tied to some aspect of our major program, the “dual meeting” format serves as a great setting in which to discuss issues such as how can we get our students to perform better or what additional opportunities we should try to offer as a department to enhance our students’ learning experiences. In short, the “dual meetings” serve as a great forum within which to apply what we learn about student learning from assessment to our major program practices.

Another noteworthy incentive is that by routinely working on our assessment plan, we have the option of noting this work as one of our service activities on our faculty performance reports. This information is considered in our annual faculty evaluations (which are performed by one’s academic dean). Any meaningful addition to the list of service that was rendered is almost always welcome by faculty members. Moreover, various administrators at our institution have indicated a fundamental appreciation for the diligent work which goes into well-thought out major program assessment.

Institutional Support for Assessment-Related Activities

Finally, institutional support from the University serves as a key ingredient in the successful design and implementation of our assessment plan. One study indicated that out of a surveyed group of over two hundred Political Science faculty members from various institutions, a majority of them felt like they did not have adequate resources to support their assessment tasks. Further, the study found that departments with more assessment resources available tended to have more developed assessment plans than did those departments with fewer assessment resources (Kelly and Klunk, 2003).

One way that the institution facilitates the execution of program assessment is through providing a schedule by which departments have to complete and submit their assessment plans. The University’s Office of Assessment and Institutional Effectiveness has a schedule that specifies which departments are responsible for submitting completed major program assessment plans during any given academic year. Given this information, our department has a structure within which to better plan and schedule assessment plan work so that major issues can be resolved well before the submission deadline. The Office of Institutional Effectiveness sends multiple email reminders (along with sometimes making announcements in University meetings) regarding departments that are scheduled to turn in assessment plans during the course of an academic year. These announcements also include a reminder that assistance with assessment is available from several administrators in the Office of Assessment and Institutional Effectiveness. An additional resource provided to faculty by the Office of Assessment and Institutional Effectiveness is the Formative Assessment Team (composed of faculty members and an administrator). This team reviews academic major program assessments and provides feedback that can be used to strengthen them. Finally, both the Office of Assessment and Institutional Effectiveness and the University have sponsored assessment workshops that faculty have the option of attending.

Openness to Modifying the Essential Ingredients of the Assessment Process

A standard recommendation in the assessment world is to “close the loop” by using the results of assessment to bring forth improvement in student learning and to enhance the quality of academic programs. In addition to that step, it is also very important for the department to periodically reevaluate the essential ingredients in its assessment process. This essential step is very easy to overlook for multiple reasons. First, it is easy to fall into the habit of “going through the motions” of the process by which assessment is performed and not consider the possibility of revising ingredients of the process. Also, some faculty (assessment coordinator included) immerse themselves in an array of other responsibilities related to the job (such as teaching heavy course loads and performing various service activities), especially at the end of an academic term. Having a well-established process by which program assessment is done can even create an assessment process “comfort zone” of sorts for faculty. This assessment comfort zone could be positive if it lessens the assessment anxiety of faculty. However, departmental faculty should never become so complacent and think that their current list of assessment process ingredients will always be the best list. A number of factors could necessitate a modification in the working list of essential ingredients. A reduction in the amount of time that faculty have available at the beginning and end of semesters could warrant changes in the usage and timing of the strategically-scheduled and “set-aside” meeting times. A much shorter time period at the beginning of the semester in which faculty members are under contract
could necessitate multiple formal, lengthy program meetings shortly after the semester begins. Also, the department may decide on its own that new ingredients need to be added to the process. For instance, departments may decide to require the departmental faculty to attend assessment-related workshops during every academic year. This could particularly be the case if the department undergoes significant faculty turnover and ends up with multiple faculty members who are new to major program assessment. Likewise, designating a new person for the assessment coordinator position could lead the department to require that the coordinator attend assessment training workshops. The department could consider such training requirements to be necessary in order to maintain and enhance its major program assessment process.

CONCLUSION

Academic program assessment can indeed be a very intense, complex, and time-consuming endeavor. However, with a carefully thought-out set of ingredients, executing a successful major program assessment process is quite feasible. In this paper, I have discussed and analyzed some of the ingredients which have been essential to one small Political Science department’s ability to successfully engage in major program assessment on a routine basis. By using a set of essential ingredients, academic departments—even very small departments with only several faculty members—can successfully carry out the assessment endeavor and improve their programs. Further, employing essential ingredients to the major program assessment process improves the chances of obtaining meaningful information with which to improve student learning. Finally, departmental faculty always need to be aware of situations which may warrant a revision of the ingredients in the department’s recipe for its major program assessment. The process by which a department carries out its assessment plan is always a work—or a recipe—in progress.

NOTES

1 In addition to performing assessment on our major program, we also performed formal assessment on the political science classes that belong to the General Education curriculum. In this paper however, I focus only on major program assessment.
2 The department also employed several part-time instructors during most of this time period. However, the classes taught by the part-time instructors were usually not part of the departmental major program assessment plan during the most of this time. Therefore, the part-time faculty members were not included in the department’s assessment process for most of the time period.

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The Airport Project: Art-Based Service-Learning in the Social Studies

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Abstract
This article presents the findings of a study on an art-based, service-learning project for homecoming veterans at a public school in Detroit. After interviewing a panel of veterans about their service and homecoming experiences, high school students designed welcome-home signs for display in the Detroit Metropolitan Airport. The airport exhibited six drawings in the concourse and baggage areas from Veterans Day through Thanksgiving weekend in 2015. To the present day, two drawings have remained on display in the baggage area. In the form of a calendar, 13 drawings were shared with a local and historic Veterans of Foreign Wars (V.F.W.) post. Sixty-three students participated in this study by completing surveys. The findings indicate that the service-learning project increased students’ understanding of the perspectives of returning veterans and how civilians can support them.

Introduction
About one percent of the United States population today serves in the Armed Forces, and the experiences of military personnel and veterans are unfamiliar to many civilians (Pew Research Center, 2010; Bouvard, 2012; Schultz & Chandrasekaran, 2014). An art-based, service-learning project for homecoming veterans was implemented in a public school in Detroit in order to foster interactions and understanding. After interviewing a panel of veterans about their service and homecoming experiences, high school students designed welcome-home signs for display in the Detroit Metropolitan Airport. The project facilitated conversations between veterans and civilians about war and societal reintegration. Through art and design, the students communicated support. Theoretically this article is rooted in constructivist approaches to social and civic education (Dewey, 1916/2012). Civic education emphasizes respectful interactions on public matters as well as engagement in communities (National Council for the Social Studies, 2013).

The School and the Students
During the 2015-2016 academic year, when this study was conducted, the all-male public school was attended by 166 middle and high school students. About 98% of the students were African American, and 61% were eligible for free or reduced-price lunch. Sixty-three students participated in this study by completing optional and anonymous surveys. The students were enrolled in United States history and/or elective Junior Reserve Officer Training Corps (JROTC) courses. Sections were blended for collaborative work. This IRB-approved study was conducted by a university professor and two full-time teachers with the support of the principal.

Research Methods
Geoffrey Mills describes action research as a systematic inquiry within the school setting that “…creates opportunities for all involved to improve the lives of children and to learn about the craft of teaching” (Mills, 2011, p. 7). From action research, insights are gained into the learning process (Mertler, 2014). Mixed methods were used, in this study, to explore four key research questions. The mixed-methods approach to inquiry is ideal for action research; social complexities and diverse perspectives are captured (Greene, 2007; Cf. Teddlie & Tashakkori, 2009; Creswell & Plano Clark, 2011). The research questions for this project were a) Would engagement in an art-based, service-learning project increase students’ understanding of how civilians can support veterans?; b) Would participating in semi-structured interviews of veterans increase students’ understanding of the perspectives of homecoming servicemen and –women?; c) Would interviewing veterans prior to engaging in a service-learning project be motivational? If so, why?; and d) Would the students be inspired by knowing that their artwork would be viewed by veterans in an international airport? Why or why not?

The researchers created an eight-item survey with an embedded design. Seven of the items prompted students to record responses on Likert scales as well as to write comments. The eighth item invited additional, open-ended comments on the project. The researchers administered the anonymous and voluntary surveys in hard copy upon the project’s conclusion. They subsequently entered data into SurveyMonkey, a web-based, analytical tool. In an exploratory, heuristic process, the students’ comments were manually coded, and representative statements were identified (Saldaña, 2013). To gain additional insights, the researchers administered a second survey with only two open-ended questions about three weeks after the collection of the first survey. The questions were a) What did you learn from the veterans’ project? and b) In what other ways could you and other civilians support veterans? Twenty-three students opted to complete the second survey. Analyzed separately, quotations from the second survey have been integrated, with designations, in this article. With Tagxedo, a web-based, word-cloud creator, the authors generated a cloud to illustrate the students’ responses to question b. Field notes supported the validity of the findings.

The Project

The service-learning project had multiple components. In preparation for the observance of Veterans Day, the students participated interactively in lectures. They reflected on the role of warriors in societies throughout history, and they considered how the U.S. Armed Forces today are comprised of volunteers who represent only a small percentage of the population (Tick, 2014). In exploring the origins of the Veterans Day holiday, they learned about Armistice Day and the cessation of hostilities on the western front on November 11, 1918. When reading the Veterans Day Proclamation of 1954, they learned that Dwight Eisenhower had sought to include and honor all veterans by renaming Armistice Day. The American Legion and other veterans groups had long supported reframing the holiday (Kinder, 2015). In the proclamation, Eisenhower asked U.S. citizens to remember the sacrifices of veterans and to rededicate themselves to the promotion of an enduring peace.

During instruction, the students considered how Veterans Day has been and continues to be observed. They viewed pictures of visits by veterans to the White House, the annual concert at West Point, Veterans Day parades, commemorative posters by the Department of Veterans Affairs, and the display of flags in front of federal buildings. After viewing clips from the film, The way we get by (Pullapilly & Gaudet, 2009), the students reflected on the reception of active duty service members by civilians. Although most U.S. soldiers had returned from the wars in Iraq and Afghanistan before the airport project was implemented, thousands were and still are still deployed (Lander, 2016). When they return to the United States, they arrive mostly by plane. Because the Detroit Metropolitan Airport, which is located only 19 miles from the students’ school, does not serve as a major hub for the transport of military personnel, homecoming veterans are rarely greeted by members of the public, who are unaware of their flight schedules. Typically only family members and friends are present.

To educate the students about the perspectives and experiences of homecoming veterans, veterans were invited to participate in a panel. The veterans were contacted through veterans’ organizations and professional connections. Three men volunteered to present. In the United States Army and the Marines, two veterans had served in Iraq. As civilians, they worked for Give An Hour, a nonprofit organization for
veterans, and in the state senate, respectively. The third panelist had served in Operation Joint Endeavor in Bosnia while in the U.S. Army. After serving, he became an educator.

Prior to the panel, the students read interview questions from the Library of Congress’ Veterans History Project (n.d.) and other sources, and they wrote their own questions. After each veteran gave an autobiographical presentation at the school, the students engaged in semi-structured interviews. Immediately following the interviews, they began drawing welcome-home signs for the airport. The students were asked to create one or two drawings using graphite and colored pencils. Six drawings were selected in a juried process for display in the concourse and baggage areas of the airport. An advertising company donated space, and the airport’s management agreed to exhibit the drawings from Veterans Day through Thanksgiving weekend. In addition, 13 drawings were included in a 2016 calendar which was given to the veterans, who had participated in the panel; a local and historic V.F.W. post; and students. The calendars were also posted in multiple classrooms and offices in the school.

To share the images of the exhibition with the students and to document the project, one of the authors photographed the students’ welcome-home signs in the airport. Two enlarged signs spun as posters over baggage carousels, and four digitized drawings appeared throughout the main concourse on the flight information display (F.I.D.) screens. The author also documented photographically the second display of the students’ work, the calendar, in the V.F.W. post. At the school, the students saw the photographs in a special slideshow, and they engaged in reflective conversation about the project and its outcome.

Findings

The findings of this study suggest that the art-based, service learning project increased students’ understanding of how civilians can support veterans. The vast majority of the students either strongly agreed (52.38%) or agreed (42.86%) with the statement, “The veterans project gave me a better understanding of how civilians can support veterans.” Of the respondents, 3.17 were neutral, and 1.59 strongly disagreed. When asked on the second survey to describe other ways in which they and other civilians could support veterans, the students suggested offering financial support; expressing thanks and well wishes in person, via video messages, and in cards; showing respect; having parades and parties; and sending care packages. One student wrote, “To let them know you care is the best support you can give.” The students’ responses are graphically represented by figure 5.

While planning and drawing, the students focused on their audience: homecoming veterans. On the surveys, most students reported that they had been motivated by the prospect of veterans’ viewing their welcome signs. Over 88% either strongly agreed (52.38%) or agreed (36.51%) with the statement, “Knowing that our welcome signs would been seen by veterans in the airport was motivational.” On a survey, one student explained, “Because they know we care.” Another wrote, “It helps to know we’re helping.”

Interviewing the veterans gave students insight and motivation. With the statement, “Interviewing the guest speakers gave me a better understanding of the perspectives of returning veterans,” 36.51% of the young men strongly agreed, 49.21% agreed, and 14.29% were neutral. No one disagreed. Over 92% of the students either strongly agreed (47.62%) or agreed (44.44%) that interviewing the veterans for the project had been motivational. Nearly 8% of the students were neutral. One student explained, “I had an interest in talking and asking questions.” Another wrote, “(The interview) gave me knowledge.”

Most students (84.13%) reported that the project had increased their understanding of the Veterans Day holiday and its history. Over 82% strongly agreed (39.68%) or agreed (42.86%) that their awareness of how symbols can represent the United States, their state, and their community grew. The students used relevant designs and colors in their signs.

The surveys suggest that the creation of the calendar was incentivizing. In the V.F.W. post, the calendar conveyed the students’ messages of support to veterans of different wars, who may not have traveled through the airport when the signs were exhibited. The students’ work therefore took another authentic, communicative form. The calendar was a tangible, meaningful product (Krajcik & Shin, 2006/2014).

On the second survey, 23 students wrote what they had learned from the project. Multiple students described having an increased awareness of the sacrifices made by veterans and the ways in which
civilians could convey support. Through service-learning projects, students gain insight into relationships within societal contexts, and they forge connections (McMillan, 2002; Carter, 1997; Farber, 2011). Representative comments from the surveys are written below:

“I learned that there are many ways to support people, but veterans in particular. Whether they saw combat, or supported those who did, they were away from home and have very stressful jobs. This is why they need support...”

“I learned to show support to our veterans and to be thankful.”

“I learned to show love and appreciation by drawing art, thanking our veterans for their service.”

Discussion

In Democracy and education, John Dewey described democracy as “…a mode of associated living, of conjoint, communicated experience” (1916/2012). Service in the Armed Forces has been voluntary since 1973 (Boulton, 2012). Largely been unaffected by war, civilians often do not grasp what combat veterans have endured (Naphan & Elliott, 2015; Sherman, 2015). Former Marine and veteran of the Iraq War, Phil Klay (2014, p. 49), described the disconnectedness in his short story, “Redeployment.” He wrote, “In Wilmington, you don’t have a squad, you don’t have a battle buddy, you don’t even have a weapon...You’re safe, so your alertness should be white, but it’s not...Outside, there are people walking around by the windows like it’s no big deal. People who have no idea where Fallujah is, where three members of your platoon died. People who’ve spent their whole lives at white.” In “Bodies,” Klay (2014, p. 63) wrote, “…everybody thanked me for my service. Nobody seemed to know exactly what they were thanking me for.”

Vietnam veterans, such as Karl Marlantes, have also described the dichotomy between veterans and civilians. In What it is like to go to war, Marlantes (p. 176) recalled an incident that occurred while he was walking in uniform in Washington, D.C., “A group of young people, my age, began to follow me down the street on the opposite side, jeering, calling me names, chanting in unison...I stood and looked at them across the chasm of that street, not knowing what to say or do...I wanted to come back home, to be understood, to be welcomed.”

In the airport project, the students discussed the nature of the social contract between civilians and warriors and its potential for brokenness. Asserting that the relationship between citizens and veterans is in disorder, Edward Tick (2014; Cf. Bouvard, 2012) has advocated for programs wherein veterans can relate their stories to civilians. He has emphasized the cultivation of empathy and community involvement.

“I learned how much veterans give up for us,” wrote a student participant in the airport project, on the second survey. By listening to the panelists’ stories and perspectives, he and others gained an appreciation of veterans’ diverse experiences and challenges. One panelist explained that, months after returning to the United States, he had continued to drive 40 miles per hour on the freeway, despite the posted 70-mile-an-hour limit; in Iraq, slow speeds had been necessary to detect improvised explosive devices.

At the high school, veterans related how significant gestures from family, friends, and people in their communities had been while they were deployed. One panelist described the elation that he and other soldiers had felt upon receiving a box of candy from high school students. He described the longing for home that servicemen and -women sometimes feel. The published writings of other veterans have similarly conveyed this nostalgia. Army veteran and poet, Brian Turner (2005, p. 59), wrote these lines while serving in Iraq:

I’m in Wyoming. I’m in New York.
I’m leaning in to kiss a woman
in the cornfield down by the river.
I’m with children drawing portraits
in the sand, old men watching fireflies

All of the panelists expressed appreciation to the students, who were involved in the airport project, for their efforts to show support for homecoming veterans. By donating their time to visit the
school, the panelists themselves were engaging in community service to help other veterans and to educate the students. Community service is a vital component of civic education (Laguardia & Pearl, 2005). Social participation and interaction are democratic practices (Ligon, 2005). The airport project led to reflections on communal responsibility and integration. On the second survey, one student wrote, “(The project) helped me find out and understand how to support our veterans and ways to thank them.”

**Implications and Conclusion**

The findings of this action-research study suggest that multifaceted projects that bridge communication gaps with veterans advance civic education. Through the airport project, high school students’ awareness of the wartime and homecoming experiences of veterans increased. The students’ interviews of veterans served as catalysts for their participation in an authentic, art-based, service-learning project. Students gained understanding of public matters, and they forged connections within the community.

**References**


**Web-based References**


Figure 1. A student’s welcome-home sign in the baggage area
Figure 2. Students’ drawings on flight information display screens in the concourse.

Figure 3. Students’ responses to The veterans project gave me a better understanding of how civilians can support veterans.

Figure 4. Tagxedo word cloud of students’ responses to In what other ways could you and other civilians support veterans?
Figure 5. Students’ responses to *Knowing that our welcome signs would be seen by veterans in the airport was motivational.*

![Bar chart](image)

Figure 6. Students’ responses to *Interviewing the guest speakers gave me better understanding of the perspectives of returning veterans.*

![Bar chart](image)

Figure 7. Students’ responses to *Interviewing the veterans for the project was motivational.*

![Bar chart](image)
Figure 8. Thirteen drawings were included in a calendar.

Figure 9. Students’ responses to *Knowing that our welcome signs would be made into a calendar increased my interest in the project.*
1. The veterans’ project gave me a better understanding of how civilians can support veterans.
_____strongly agree _____agree _____neutral _____disagree _____strongly disagree
Comments:___________________________________________________________________________
_______________________________________________________________________

2. Knowing that our welcome signs would be seen by veterans in the airport was motivational.
_____strongly agree _____agree _____neutral _____disagree _____strongly disagree
Comments:___________________________________________________________________________
_______________________________________________________________________

3. Interviewing the guest speakers gave me a better understanding of the perspectives of returning
veterans.
_____strongly agree _____agree _____neutral _____disagree _____strongly disagree
Comments:___________________________________________________________________________
_______________________________________________________________________

4. Interviewing the veterans for the project was motivational.
_____strongly agree _____agree _____neutral _____disagree _____strongly disagree
Comments:___________________________________________________________________________
_______________________________________________________________________

5. The veterans’ project increased my understanding of the Veterans Day holiday and its history.
_____strongly agree _____agree _____neutral _____disagree _____strongly disagree
Comments:___________________________________________________________________________
_______________________________________________________________________
6. Designing the welcome home signs increased my awareness of how symbols can represent the United States, Michigan, and our community.  
_____strongly agree  _____agree  _____neutral  _____disagree  _____strongly disagree
Comments:___________________________________________________________________________
___________________________________________________________________________

7. Knowing that our welcome signs would be made into a calendar increased my interest in the project.  
_____strongly agree  _____agree  _____neutral  _____disagree  _____strongly disagree
Comments:___________________________________________________________________________
___________________________________________________________________________

8. Please write any additional comments that you have about the veterans project below. Thank you!
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Survey no. 2

1. What did you learn from the veterans’ project?
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

2. In what other ways could you and other civilians support veterans?
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
Air Pollution and Reproductive Health in Developing Countries

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Abstract:
The purpose of this paper is to consider the impact of environmental degradation, air pollution in particular, on levels of women’s reproductive health in developing countries. The current literature on reproductive health suggests that social development and reproductive rights influence the level of reproductive health cross nationally (Pillai & Gupta, 2006). In this study, we examine the effects of air pollution levels on reproductive health levels in developing countries. Though we found that air pollution levels have a negative effect on reproductive health, the direction of the estimates of the effects of social development on reproductive health was contrary to expectation. The reason for this has to be explored further using more valid and reliable measures of social development than the one used in this study.

Introduction
The purpose of this paper is to consider the impact of environmental degradation, air pollution in particular, on levels of women’s reproductive health in developing countries. Air pollution results from intense utilization of natural resources. Production of carbon dioxide in large quantities, for example, from burning energy sources for various household activities cause environmental pollution (Burum, 2010; Pillai, 1996). Women in developing countries, in particular, face the stressful consequences of environmental degradation as they expend considerable time and effort in search of energy and water sources. Environmental stress may increase the labor demand within the household and encourage large family size (McDonald, 1999). As environmental degradation increases in developing countries, level of reproductive health is likely to decrease. Very few studies have examined the net contribution of air pollution to the variability in reproductive health in developing countries.

World Health Organization (1999) defines reproductive health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. Reproductive health implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so (WHO, 2002).

The ultimate goal of development is to improve quality of life and well-being for entire national populations. We achieve that goal to the extent that the health of society’s most vulnerable, poorest and least powerful improve. Literature on reproductive health in developing countries shows a strong positive relationship between economic development and reproductive health (Kaufman, 2005).

The current literature on reproductive health suggests that both social development and reproductive rights influence the level of reproductive health cross nationally (Pillai & Gupta, 2006). The term ‘reproductive rights’ is relatively of recent origin. For roughly a decade after its
introduction at the International Meeting on Women and Health in Amsterdam (1984), the scope of the term remained limited to state actions against women’s reproductive well-being. However, almost a decade later, the 1993 World Conference on Human Rights, held in Vienna, and the 1995 Fourth World Conference on Women in Beijing, clearly recognized the intrinsic relationship between women’s reproductive health and reproductive rights. (Fathalla, 1992; Cook, 1993, 1995; Dixon-Mueller, 1993; Garcia-Moreno & Claro, 1994; Germain, Nowrojee, & Pyne, 1994; Yamin, 1996). Women’s vulnerability to poor reproductive health is associated with discrimination and unequal rights in marriage, divorce, and inheritance. Several religious and cultural norms leave the decisions regarding marriage partners, family formation, and family size to women’s guardians. The choices women make, with respect to reproductive health, can be broadened and realized only in the presence of a wide variety of reproductive rights (Mann, 1996, 1997; Mertus, 2000; Easley, Marks, & Morgan, 2001; Marks, 2001). There is a positive relationship between the level of reproductive rights and reproductive health.

The second determinant of reproductive health, social development, tends to facilitate a broad level of participation spanning all levels of social institutions. Citizen participation at all societal levels can take place only when social transactions are bound by values of social justice and equality. To this extent, social development programs are guided by a social justice framework. A broadening set of opportunities for social participation is a function of social development (Mohan, 2007). At the individual level, social development is purported to promote quality of life. An expansion of choices that people enjoy in order to improve their own welfare requires vast social institutional development over and above mere economic development. Sen (1997) presented this pattern of a broad development of choices as freedom. Improvement in social participation increases opportunities which impact on individual substantive freedoms or capabilities. Lack of democratic freedoms, the press and the absence of agencies that represent people’s voices are all characteristic of constraints which citizenship theorists suggest are associated with poor citizenship rights and low levels of social development.

At higher levels of social development, social participation is sustained by improving availability and universal access to societal resources necessary to realize a number of social choices that individuals make. With social development, human rights are valued and recognized (Midgley, 1995; Ruger, 2004a, 2004b, 2004c). The struggle for the improvement in reproductive rights is co-terminus with improvement in social development. In general, there is a positive relationship between the level of social development and the reproductive rights level.

Methodology: Data

Data sources for all variables are from World Bank database (2010), Pillai & Gupta (2006) Cross National Data, and Population Action International (2001). The cases in this study are developing countries identified by World Bank as low income and lower middle income categories. These countries, numbering about 98, are considered as developing countries. One country does not have any data in all variables was excluded in this paper. Final data were included 97 developing countries. All these countries are divided into six sub area and listed in Table 1.

(See Table 1)

Variables and measurement

Variable for measuring social development is improved water access (percentage of population with access) which developed by The World Bank in 2006. Improved water access means the percentage of population access water in one kilometer of dwelling with at least 20
liters a day for each person from improved source (World Bank, 2010). The improved source includes rain collection, clean spring, and household connection (World Bank, 2010).

The indicator of economic development is GNI per capita, computed using the Atlas method (current US dollar) developed by World Bank in 2006. GNI per capita (formerly GNP per capita) is gross national income divided by midyear population (World Bank, 2010). GNI includes all residents’ produce income and product taxes but not includes abroad income and currently converted to US dollars by using official exchange rate (World Bank, 2010).

The variable of environment development is CO2 emissions (metric tons per capita) reported by World Bank in 2006. Carbon dioxide emissions are exhaust gas from burning fossil fuel which includes using gas, solid, and liquid fuel and manufactories cement (World Bank, 2010).

The measure of reproductive rights is the REGR scale developed by Pillai and Gupta in 2006 (Pillai & Gupta, 2006). Reproductive rights include two dimensions: legal abortion and personal marriage and divorce rights. Abortion rights include “illegal with no exception, save women’s life, preserve physical and mental health, rape, fetal impairment, economic or social reasons, and on request (Pillai & Gupta, 2006).” Personal marriage and divorce rights include “personal rights to inter-racial, religious, or civil marriage, to divorce, to marriage, and maternal benefits (Pillai & Gupta, 2006).”

The variable of reproductive health is measured using the reproductive risk index developed by Population Action International in 2001. The reproductive risk index ranks 33 countries on 10 indicators of sexual and reproductive health which include “early childbearing and adolescent reproductive health, family planning and unwanted pregnancies, abortion policies, nutritional anemia in pregnancy, HIV/AIDS among women and men, and risk of death in childbearing (Population Action International, 2001).” It was separated into five categories: score above 60 means very high risk, score between 45-60 means high risk, score between 30- 44.9 means moderate risk, score between 15-29.9 means low risk, and score lower than 15 means very low risk.

The mean imputation method was used to deal with the problem of missing data. In general, the proportions of missing data values in each of the independent variables were less than 10 percent of the total number of cases. All cases with missing data on the dependent variable, reproductive risk index, were excluded. Nearly twenty three cases were dropped and resulting in a total sample size of 74 countries to be analyzed. Mean scores before imputation are listed below in Table 2. In the case of the reproductive rights variable, each raw number was increased by 50 in order to get a positive mean number.

(See Table 2)

**Analysis and results**

The data are analyzed using the technique of path analysis. Path analysis procedures yield direct and indirect effects of social, economic, and environment development on reproductive rights and reproductive health (Figure 1).

(See Figure 1)

The results from path analysis are presented in Table 3. First, the effects of social, economic, environment development, and reproductive rights on reproductive health were estimated. It was found that Economic Development does not have significant effect on reproductive health (Beta=.044, p>.05). The direct and indirect effects of social, economic, air pollution on reproductive health are presented in Table 3. The results show that economic development does not have a significant effect on either reproductive rights or reproductive health. Furthermore, air
pollution does not have significant effect through reproductive rights on reproductive health. The final model, a reduced form model is presented in Figure 2.

(See Table 3)
(See Figure 2)

The results from path analysis by using a Structural Equation Modeling approach are presented in Table 4. The goodness of fit index (GFI) and the adjusted goodness of fit index (AGFI) are used to assess the degree of fit of the proposed model. GFI and AGFI values above .9 are considered indicative of good model fit. The values obtained for GFI and AGFI are .989 and .889 respectively. These values suggest the presence of a good fit for the proposed model of reproductive health. All factor loadings on reproductive health are significant. See Table 4.

(See Table 5)
(See Figure 2)

Social development has direct and indirect effects through reproductive rights on reproductive health. Total causal effect on reproductive health is .486. Air pollution has a direct effect on reproductive health but no indirect effect through reproductive health. Total causal effect from air pollution on reproductive health is .438. The direct effect of reproductive rights on reproductive health is .299. Covariance between social and environment development is .505. All results are shown in Table 5. The inter-correlations presented in Table 6 indicate that air pollution has a small correlation with reproductive rights (.387). Social development, air pollution and reproductive rights are correlated with reproductive health. See Table 6.

(See Table 5)
(See Table 6)

**Discussion and Conclusion**

The results of this study, though presented using a causal analysis frame work should be interpreted cautiously as merely correlational rather than causal. The direction of estimates of the effects of the independent variables, social development, and economic development on reproductive health are opposite of what was expected. We expected both these variables to have a negative effect on reproductive health as measured by the reproductive risk. The results obtained suggest that increases in the levels of social development significantly increases reproductive risk levels indicating a decline in levels of reproductive health. The effect of social development on reproductive rights is positive as expected. The relationship is also significant at the .05 level. The results of the study support the negative effects of air pollution on reproductive health. As levels of CO2 emissions per capita increases, the reproductive risk level significantly increases. Prior studies have focused on the undesirable effects of air pollution of various aspects of human health and have found that high levels of CO2 in the air are undesirable for human health. The results of this study support similar conclusions with respect to women’s reproductive health level in developing countries. The reasons for the unexpected findings with respect to the effect of social development on reproductive health need to be further explored.
<table>
<thead>
<tr>
<th>Area</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>America &amp; Carib</td>
<td>Belize, Bolivia, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Kiribati, Nicaragua, Paraguay, Samoa, Cambodia, China, Indonesia, Korea Demo, Lao People's De, Mongolia, Myanmar, Marshall Islands, Micronesia Fed States, Papua New Guine, Philippines, Solomon Islands, Thailand, Timor-Leste, Tonga, Vanautu, Viet Nam</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>Cambodia, China, Indonesia, Korea Demo, Lao People's De, Mongolia, Myanmar, Marshall Islands, Micronesia Fed States, Papua New Guine, Philippines, Solomon Islands, Thailand, Timor-Leste, Tonga, Vanautu, Viet Nam</td>
</tr>
<tr>
<td>East Europe &amp; Central Asia</td>
<td>Albania, Armenia, Azerbaijan, Georgia, Kyrgyz Republic, Moldova, Tajikistan, Ukraine, Uzbekistan, Djibouti, Egypt, Iran, Iraq, Jordan, Mali, Morocco, Syrian Arab Rep, Tunisia, Turkemenistan, West Bank and Gaza, Yemen</td>
</tr>
<tr>
<td>Mena</td>
<td>Albania, Armenia, Azerbaijan, Georgia, Kyrgyz Republic, Moldova, Tajikistan, Ukraine, Uzbekistan, Djibouti, Egypt, Iran, Iraq, Jordan, Mali, Morocco, Syrian Arab Rep, Tunisia, Turkemenistan, West Bank and Gaza, Yemen</td>
</tr>
</tbody>
</table>

| Table 2: Reproductive Risk Mean Score for Each Region before Mean Imputation |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                               | America & Carib | East Asia & Pacific | East Europe & Central Asia | Mena | South Asia | West Europe |
| Social (%)                    | 84.77 | 78.00 | 89.22 | 85.00 | 77.00 | 63.36 |
| Economic (GNI)                | 1929 | 1504 | 1590 | 1772 | 1036 | 622 |
| Environment (metric tons per capita) | 1.17 | 1.55 | 3.25 | 3.31 | .85 | .27 |
| Reproductive right (+50)      | 49.77 | 49.78 | 50.12 | 49.25 | 49.37 | 49.08 |
| Reproductive risk index       | 44.54 | 32.21 | 21.93 | 43.14 | 52.1 | 60.33 |

Table 3: Regression of Reproductive Health and Rep. Rights on Selected Determinants.
Table 4: Estimated Path Coefficients of Selected Determinants of Reproductive health in the proposed Path Model.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Beta</th>
<th>Intercept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive Right</td>
<td>.292*</td>
<td>427.769*</td>
</tr>
<tr>
<td>Economic Development</td>
<td>.044</td>
<td></td>
</tr>
<tr>
<td>Social Development</td>
<td>.304*</td>
<td></td>
</tr>
<tr>
<td>CO2 per capita</td>
<td>.410*</td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Effects of selected determinants on Reproductive health Developing countries

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total Causal</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Joint Effect Total</th>
<th>Social development</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social development</td>
<td>.486</td>
<td>.321</td>
<td>.165</td>
<td>.221</td>
<td>-</td>
<td>.221</td>
</tr>
<tr>
<td>Environment</td>
<td>.438</td>
<td>.438</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive Right</td>
<td>.299</td>
<td>.299</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Intercorrelation Matrix of determinants

<table>
<thead>
<tr>
<th>Variables</th>
<th>Social</th>
<th>Environment</th>
<th>Reproductive</th>
<th>Reproductive</th>
</tr>
</thead>
</table>

80
<table>
<thead>
<tr>
<th></th>
<th>development</th>
<th>Right</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social development</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>0.505</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Reproductive Right</td>
<td>0.552</td>
<td>0.387</td>
<td>1.000</td>
</tr>
<tr>
<td>Reproductive Health</td>
<td>0.698</td>
<td>0.706</td>
<td>0.637</td>
</tr>
<tr>
<td>Mean</td>
<td>73.67</td>
<td>1.25</td>
<td>47.51</td>
</tr>
<tr>
<td>Std.Dev</td>
<td>17.64</td>
<td>1.76</td>
<td>0.65</td>
</tr>
</tbody>
</table>

Figure 1: Reproductive Health Model

Figure 2: Estimated Reduced form Path Model of Reproductive Health in Developing Countries
REFERENCES


Virtual Teams: A Case Study in Adult and Career Education

Dr. Diane Wright  
Valdosta State University

Abstract

This paper reports on the findings of a case study in two Adult and Career Education project management courses where virtual teams 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 professors 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 virtual teams, strategies 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.


The business community overwhelmingly identified educators as the sector most responsible for creating a workforce ready to compete (K-12 Education – 75.6 percent, Four-Year College – 68.4 percent, Two-Year College – 45.2 percent). Employers report that new entrants to the workforce need not only the basic skills—reading, writing and math—but that in the 21st century business world, possessing a range of applied skills directly related to the workplace is critical to success. When asked to rank skills in terms of their importance in the workplace, employers put professionalism, teamwork, and oral communication at the top of the list. Based on the study, one of the key skills sought after in the 21st century graduate is the need to be global, instant, and in constant communication as well as the ability to be a functional member of long-distance teams. (p. 20).

To prepare to be effective virtual team members, students need to develop virtual teamwork skills including communicating effectively, working with team members to solve problems, negotiating with colleagues, resolving conflicts, and collaborating with people from other cultures (Goold, Augar, & Farmer, 2006). Since online students are already geographical dispersed and rely on technology for communication, incorporating virtual team projects into online courses is a logical step. Ubell (2010) suggests including a team project in every online class.

One key facet of change taking place in the Adult and Career Education Department (ACED) at Valdosta State University and at institutions of higher education around the world is the growth of online learning. Allen and Seaman (2014) stated that, currently, 32 percent of higher education students take at least one online course during their academic career. The 2014 Survey of Online Learning conducted by the Babson Survey Research Group reveals the number of students taking at least one online course has now surpassed 7.1 million. “The rate of growth in online enrollments remains extremely robust, even as overall higher education enrollments have shown a decline,” said study co-author Jeff Seaman.

As the number of online courses offered in ACED increases, online education presents an opportunity to reexamine the effectiveness of our educational work. The trend towards online learning has propelled this author to incorporate online groups in her classes. Online groups are usually small and designed to help online students develop problem-solving skills, share and challenge one another’s ideas, and better prepare them for future careers (Jonassen, 2000; Koh, Barbour, & Hill, 2010; Smith et al., 2010).
Yet, online group work presents new challenges for students. They are required to manage online group work, including arranging their online and offline study environments (Deimann & Bastiaens, 2010), coordinating time for group work (Biasutti, 2011), handling online and offline distractions (Whipp & Chiarelli, 2004), keeping themselves motivated (Smith et al., 2011), and coping with negative emotions in the group work process (Ku, Tseng, & Akarasriworn, 2013).

How can faculty in higher education enhance their teaching effectiveness in online group learning environments? With more and more courses being offered online, faculty are expected to be master teachers in both face-to-face and online environments. This research seeks to contribute to that effort by exploring the effectiveness of group work in a virtual environment.

Classes in all formats have distinct strengths and weaknesses. Perhaps the greatest strength of face-to-face courses is the degree to which they facilitate building relationships and community in and out of the classroom. Increasing access to “non-traditional” or place-bound students may be the greatest strength of online and hybrid courses, which enable universities to include, people who desire a degree or certificate but who cannot come to campus regularly or at all. For public universities, such as Valdosta State University, which has a mission to expand its programmatic outreach by developing and offering programs by distance learning and at off campus locations throughout the region, this goal of increasing access is especially significant.

This study is an analysis of outcomes in a course that has been taught by the author in a fully online delivery format over two semesters in the Adult and Career Education Department of Valdosta State University. The study will focus on a case study in Adult and Career Education courses where virtual teams were used to enhance online education.

A decade or so ago, virtual teams were almost nonexistent. 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 professors 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 will include a brief literature review of virtual teams, strategies 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 McInerney (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).

Students are attracted to online courses because of the convenience of being able to participate anytime from anywhere, but once enrolled can become dissatisfied with the experience (Moskal, Dziuban, & Hartman, 2010). One of the reasons for this dissatisfaction is that online learners sometimes feel disconnected from others (van Tyron & Bishop, 2009). Rovai (2002) reported that faculty has difficulty in facilitating student interactions online. Thus, there is a need to create online learning environments that foster a sense of community. Rovai (2002) summarized it best in the following statement:

Research provides evidence that strong feelings of community may not only increase persistence in courses but may also increase the flow of information among all learners, availability of support, commitment to group goals, cooperation among members and satisfaction with group efforts. (p.3).

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, Dropbox), document co-creation (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. The instructor formed teams of four based on the following criteria:

DISC profile, major, and response to experience working in groups. The DISC profile is a tool designed to improve work productivity, teamwork, and communication. The profile provided a common language that students could use to better understand themselves and adapt their behaviors with others within a work team.

Using a tool designed by Byrnes and Byrnes (2006), participants were asked to think about their experience working in groups and select the response that best suited their experience.

A. I enjoy working in groups because my group members usually help me understand the material and tasks and therefore I can perform better.

B. I question the value of group work for me, because I usually end up doing more than my fair share of the work.

C. I have little or no experience working in groups.

D. I have a different experience than the choices given above. Please describe.
One way to improve the chances that a team will work well is to agree beforehand on what everyone on the team expects from everyone else. Teams were required to create a Team Expectation Agreement. The agreement was adapted from Oakley, Felder, Brent, and Elhajj (2004). The agreement included the following components:

- **Designate managers**: Who on your team will fill each of these roles? The Project Manager will be responsible for helping the project remain in scope, reporting to the stakeholders, and presenting a regular project update to the larger group. The Time Manager will be responsible for helping teams remain on schedule and coordinating schedules between teams that have dependent deliverables. The Quality & Risk Manager will be responsible for helping teams identify possible challenges or stumbling blocks, and getting the supplies or other resources needed to help teams produce their deliverables with a high quality. The Communication Manager will be responsible for keeping track of the project materials and ensuring that the teams are communicating with each other and stakeholders.

- **Agree on a common meeting time and what each member should have completed before the meeting (readings, taking the first cut at some or all of the assigned work).**

- **Do the required individual preparation.**

- **Review returned assignments.** Make sure everyone understands why points were lost and how to correct errors.

- **Dealing with non-cooperative team members.** If a team member refuses to cooperate on an assignment, his/her name should not be included on the completed work. If the problem persists, the team should meet with the instructor so that the problem can be resolved, if possible.

When forming groups, it is important to give students ownership, freedom and autonomy, allow them to clarify their roles and specify their topics, and let them control the contents, process, and outcomes of their group work (Brindley et al., 2009).

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). Participants used Google Docs, an online word processor that allowed them to create and format documents and work with each other; and Group Me, a free group messaging app that is a free and simple way to stay in touch with the group.

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**

Data analysis indicates that the participants enjoyed group work. Chart 1 indicates that over 46 percent of the participants stated that this was their best experience working in groups.

**Chart 1. How well did you work together as a team?**

Participants indicated that communicating with each other was the key strategy used to encourage fair contribution from all members. Communication is a key factor impacting the overall performance of a team.

**Chart 2. What strategies did you use to encourage fair contribution from all members on the group assignment?**

According to the National Association of Colleges and Employers’ Job Outlook 2016 survey, employers look for leaders who can work as part of a team. More than 80 percent of responding employers said they look for evidence of leadership skills on the candidate's resume, and nearly as many seek out indications that the candidate is able to work in a team. Employers also cited written communication skills, problem-solving skills, verbal communication skills, and a strong work ethic as
important candidate attributes.

Data analysis indicates that the participants developed skills in teamwork (25%), leadership (19.2%) and communication (19.2%).

Chart 3. What skills do you feel you develop when you work on a group assignment?

Following are some of the comments participants made regarding the skills learned in the course.

I enjoyed the ability to share the ideas / thoughts and work with a team rather than doing everything on my own. We had both positive benefits from utilizing technology as well as some frustration with group technology from lost ability to communicate on black board. Google email and Google Docs as well as group me text all worked great.

I do have the strong feeling now though that although working with a group with schedules can “slow down what you might think you could have done on your own.” It is much better knowing that individuals in the team can be responsible for different segments of the project. Knowing that you don’t have to do it ALL, and knowing that when your confused in an area, you have your team to help get you on a path of understanding. I believe group effort via project team management is a good thing and brings success to an organizational project.”

Chart 4. What do you think is the greatest benefit of working on group assignments?

Following are some of the comments participants made regarding the skills learned in the course.

I had to develop patience for this class. I have a tendency to work on an assignment until it is complete, but in this class you must take your time and fully embrace each step. Determining and maintaining standard meeting times with the group was the key to our success. We were not 100% successful with every meeting, but every person took responsibility to ensure they knew what they needed to do for our team.” This virtual team experiment has helped me to gain confidence in leading a team and directing others. I don’t feel this class would have been as successful for me in a classroom environment. This class pushed me to explore online technology and find ways to utilize it.

Data analysis indicates that the greatest drawbacks of working on a group assignment were relying on others (40.4%), time management (21.2%), uneven contribution (17.3%) and uneven contribution (17.3%).

Chart 5. What do you think is the greatest drawback of working on a group assignment?

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 6. 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. The stages of group development: forming, storming, norming, and performing (Tuckman, 1965) take more time when online groups are involved. Teachers need to be aware of this when creating online projects. The issue of time is also important in another area. 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.

**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.

**References**


Chart 1. How well did you work together as a team?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>This was one of my best experiences of doing Group Work.</td>
<td>46.2%</td>
</tr>
<tr>
<td>This was an adequate Group Work experience.</td>
<td>38.5%</td>
</tr>
<tr>
<td>I did not enjoy working with this group, but I did learn a lot.</td>
<td>7.7%</td>
</tr>
<tr>
<td>This was one of my worse experiences of doing Group Work.</td>
<td>0%</td>
</tr>
</tbody>
</table>

Chart 2. What strategies did you use to encourage fair contribution from all members on the group assignment?

- Used peer strength: 1 (1.9%)
- Shared workload: 12 (23.1%)
- Set deadlines: 2 (3.8%)
- Respected peer opinions: 4 (7.7%)
- Communicated with each other: 27 (51.9%)
- Encouraged participation: 5 (9.6%)
- Set deadlines: 2 (3.8%)
Chart 3. What skills do you feel you develop when you work on a group assignment?

<table>
<thead>
<tr>
<th>Skill</th>
<th>Count</th>
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</tr>
</thead>
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<tr>
<td>Inter-cultural communication</td>
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</tr>
<tr>
<td>Interpersonal skills</td>
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<td>13.5%</td>
</tr>
<tr>
<td>Leadership</td>
<td>10</td>
<td>19.2%</td>
</tr>
<tr>
<td>Academic development</td>
<td>2</td>
<td>3.8%</td>
</tr>
<tr>
<td>Time Management</td>
<td>5</td>
<td>9.6%</td>
</tr>
<tr>
<td>Self development</td>
<td>5</td>
<td>9.6%</td>
</tr>
<tr>
<td>Communication</td>
<td>10</td>
<td>19.2%</td>
</tr>
<tr>
<td>Teamwork</td>
<td>13</td>
<td>25%</td>
</tr>
</tbody>
</table>

Chart 4. What do you think is the greatest benefit of working on group assignments?

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased confidence</td>
<td>4</td>
<td>7.7%</td>
</tr>
<tr>
<td>Develop interpersonal skills</td>
<td>4</td>
<td>7.7%</td>
</tr>
<tr>
<td>Learn from peers</td>
<td>15</td>
<td>28.8%</td>
</tr>
<tr>
<td>Opportunity to provide more input</td>
<td>2</td>
<td>3.8%</td>
</tr>
<tr>
<td>Share workload</td>
<td>7</td>
<td>13.5%</td>
</tr>
<tr>
<td>Use peer strength</td>
<td>3</td>
<td>5.8%</td>
</tr>
<tr>
<td>Develop teamwork skills</td>
<td>17</td>
<td>32.7%</td>
</tr>
</tbody>
</table>
Chart 5. What do you think is the greatest drawback of working on a group assignment?

- Poor attitude: 0% (0)
- Poor commitment: 15.4% (8)
- Rely on others: 40.4% (21)
- Time management: 21.2% (11)
- Uneven contribution: 17.3% (9)
- No drawback: 5.8% (3)

Chart 6. What means did you use to communicate with each other?

- Blackboard
- GroupMe
- Google Docs
- Email

Legend:
- Blue: Useful
- Green: Not Useful
- Pink: Did Not Use

0% 20% 40% 60% 80% 100% 120%