Chapter 1

Problem

Background and Reflection

In our Title 1, Program Improvement schools the majority of our students are typically unmotivated and disengaged due to various factors. Some of those factors may be they do not see any purpose or value in their education (Prensky, 2005). Another factor may be the students find the traditional teaching style as boring, especially when they are so accustomed to the collaborative and communicative freedom of social media such as Instagram, Kik, Facebook, and YouTube (Chang & Guetl, 2010; Covili; 2012; Round, 2011).

With the technology demands of the 21st century it is more imperative than ever that students are prepared for a job or career once they graduate (Partnership for 21st Century Skills, 2011). However large discrepancies in achievement amongst students have continued despite large investments of financial resources (Rojas-LeBouef, 2012). Schools in California are labeled as Program Improvement (PI) schools or Persistently Low Achieving Schools (PLAS) if they are not achieving up to state standards. However, all these labels are based primarily on standardized test scores. More studies on the subject have been urged for work that explores student experiences rather than simply looking at graduate rates and transcripts (Nora, Crisp, & HACU, 2012). There is potential for significant factors both within the school and the community that may influence a student's achievement and reveal influences and accomplishments aside from simply standardized test scores. Thus project-based learning (PBL) has become a larger factor in the classroom. In addition, proficiency in technology and the ability to be skilled communicators and collaborators are being heralded as characteristics of a 21st century education (Crockett, Jukes, & Churches, 2011; ISTE, 2007). Hence incorporating

more technology into the classroom in a PBL environment will help prepare students for the 21st century as it taps into their fluency with digital technology (Bell, 2010).

According to Johnson, Levine, Smith, & Haywood (2010), technology has become an ever present source of information and a method for communication and social interaction for students. It has profoundly affected the way we work, play, collaborate, communicate, learn, and succeed (Chang & Guetl, 2010; Covili, 2012; Round, 2011; Johnson et al., 2010). In fact, we are moving from an industrial era to an information era which requires that societal norms need to change for communicating, socializing, retrieving information, and learning (Covili, 2012; Luterbach & Brown, 2011). Thus as educators it is imperative that we change with the times.

Purpose of the Study

The purpose of our study was to determine if using Google Drive as a collaboration tool could increases student motivation and student engagement in our classrooms. Our desire was to achieve higher student participation in our classrooms thus reflecting if the students found greater value in their own education. It was our hope that once our students felt successful in their own learning experience they would be a more successful student thus becoming a college and career ready adult.

Our primary research questions were:

1. What effect does online collaboration via Google Drive amongst students and their peers have on student engagement and motivation in the classroom?
2. In what way does collaborating with Google Drive impact the students' overall learning experience?

For this study, we examine the impact of student collaboration using Google Drive. From the outset, we understood in the regular classroom setting students can easily collaborate

and communicate with each other during class time in a synchronous manner in the regular classroom setting (Covili, 2012). However, once class is over the collaboration ceases. It was our desire to research and examine if allowing the collaboration and communication to continue online in a virtual setting would help increase student engagement since the students can now communicate with each other in an asynchronous setting too. This would more closely reflect 21st century collaboration skills (Partnership for 21 Century Learning, 2011; Prensky, 2005).

In this action research study, we will implemented a Project Based Learning (PBL) lesson in our two classrooms in two different schools that have similar demographics. Both schools are overwhelmingly Hispanic in population and are deemed 'failing' schools by their respective Academic Performance Index (API) scores. We were curious if teaching a PBL lesson with elements of collaboration from Google Drive would help motivate and engage our students to recognize the value in their own education. Our hope was the students' reflection forms and teacher observations would reveal an increase in engagement and learner satisfaction over the course of the intervention.

For the purpose of confidentiality and anonymity of the Teacher-researchers, participants, and schools in this study, the Teacher-researchers and schools were assigned letter designations: Teacher-researcher J and Teacher-researcher H. Teacher-researcher J was for Teacher-researcher who teaches junior high and Teacher-researcher H was for Teacher-researcher who teaches high school. In order to maintain continuity throughout this action-research paper, Teacher-researcher J's research preceded Teacher-researcher H's research, as junior high school precedes high school for students. Maintaining this continuity aided in documenting the transition of junior high expectations to high school expectations.

Background on Teacher-researcher J. I (Teacher-researcher J) have taught business technology in a Title 1, Program Improvement junior high school in Orange County for over 12 years. At the time of this study, the school population is about 1600 and the majority of the students are English Language Learners. The ethnic mix of my school is 90% Hispanic, 4% White, 1% African American, 2% Asian, and 3% various other races. About 90% of my students are considered socio-economically disadvantaged based on their qualifications for Supplemental Educational Services (SES). My school is in Year 12 of Program Improvement. My school teaches only 7th and 8th grade students. We used to hold back our 8th graders if they did not meet the minimum Grade Point Average (GPA) to promote to high school, but we no longer hold back our 8th graders because of a district decision. The district's decision was based off of the large number of 8th graders retained at the junior high level and not moving on to the high school level. The large number of 8th grade retainees was affecting the enrollment of high school students. Thus the district made a decision to stop the retention of students at the junior high level.

As of this year, my school is in the last year of the Quality Education Investment Act (QEIA). This act helped to reduce the number of students enrolled in each class. Although the act mainly affects class sizes in the core classes such as math, English, history, and science, it also reduces the number of students in my classroom. Normally my class sizes are at 40 students per period, but due to the QEIA funding, it reduced my class size to about 35 students per period.

This is my first year using Google Drive at my school district. I have been very fortunate to have access to this technology which alleviated the need for my students to carry around flash drives when they were saving their work. However, I have only scratched the surface of what

Google Drive can do for my classroom. Thus, I am very excited about this action research project to see how Google Drive's collaboration features can help benefit my students.

I find it unfortunate that year after year the students in my junior high school struggle with standardized testing and low test scores. Meanwhile, in the classroom I have witnessed the students produce fantastic work on assignments that require a great deal of innovation and creativity. In a very short amount of time, they have created original stories and art work that can easily rival high ranking schools. But when it comes to tests or assignments that require them to critically think or problem solve my students tend to flounder and shut down because they do not see the value in spending the time to do what they perceive as "busy work". Hence it is my hope that allowing the students to work together collaboratively and allowing them to communicate with their peers synchronously and asynchronously through Google Drive will help motivate them and help them to persevere through the assignments.

Background on Teacher-researcher H. I (Teacher-researcher H) have taught science in high school science for over 25 years. This year I teach Earth science and Physics. Previous years, I was unable to work on my students' technology skills due to lack of resources. However, several computer labs have recently been added to our school. I now try to provide regular opportunities for my students to work with computers and in particularly with Google Drive. I am using Google Drive this year because my district has recently acquired accounts for every student. The technology skills gained from using Google Drive will help the students because the school has instituted senior exit interviews with a portfolio. This year, 2014-2015, is the first year a digital portfolio is required. Since the widespread adaptation of cell phones, I have observed the students' prior knowledge of computer use dropping precipitously.

Based on the 2013-2014 school data, my school has a population of about 2230 with an ethnic mix of 97% Hispanic, 2% Asian/Pacific Islander, and less than one percent for all other ethnic groups. Student enrollment has been declining for several years. As of the 2013-2014 school year 40% of the students are classified as English language learners and 45% are reclassified as Fluent English Proficient. My students are over 97% Hispanic and over 50% English Language Learners. Many of my students do not have computers at home and their primary access to the internet is through their cell phone. Our school population is classified as socioeconomically disadvantaged with greater than 90% qualifying for free and reduced lunches.

My school's dropout rate for the 2011-2012 school year was 23%. My school is ranked 7th with similar schools and ranked 2nd statewide. This school has been under Program Improvement (PI) for over a decade and is classified as a Persistently Low Achieving School (PLAS) (Dataquest, 2013).

With the implementation of the Common Core State Standards emphasis on evidence based writing (Bunch, Kibler, & Pimentel, 2012; Hakuta, Santos & Fang, 2013), I am concerned with developing new strategies to enhance my student's motivation and to keep them engaged with longer research-based assignments while simultaneously wanting to contribute to my students' 21st century technology skill set.

Working collaboratively with Teacher-researcher J, who has similar school demographics to my school, we created an action-research study that will demonstrate how using 21st century technology such as Google Drive may have an impact on our students' motivation and engagement in the classroom.

Definition of Terms

21st Century Skills - The partnership for 21st century skills (2009) describes 21st century skills and learning to be an intermingling of; learning and innovation skills; information, media, and technology skills; life and career skills

Bring Your Own Device (BYOD) - a policy that allows students to bring their own devices to school (Vojtek, 2015).

Cloud - a place for digital storage and applications that can be accessed from the internet from any location and often shared remotely with others (Graham, 2013).

Cloud Computing - is an Internet-based computing which shared resources, software, and information are delivered as a service that computers or mobile devices can access on demand. Examples of cloud computing services are Google Apps, YouTube, Twitter, and Dropbox (Reimche, 2013).

Collaboration – Collaboration involves much more than simply working together on a project with others. Collaborative activities ask students and teachers to engage with one another, learn from one another, and rely on one another as an integral part of their education (Covili, 2012).

Communication - Two-way process of reaching mutual understanding, in which participants not only exchange (encode-decode) information, news, ideas and feelings but also create and share meaning. In general, communication is a means of connecting people or places. In business, it is

a key function of management--an organization cannot operate without communication between levels, departments and employees. See also communications. (What is communication, n.d.)

Digital Divide - the difference in access to computers and the web between the rich and poor, white and nonwhite (Collins & Halverson, 2009).

Digital Natives - is a term used to describe people born after 1980 and the use of digital communication began to proliferate (Prensky, 2010).

Disruptive Innovation - also known as transformative innovation. Disruptive innovation is about creating a new or fundamentally different product or service that disrupts existing markets and displaces formerly dominant technologies (Wagner, 2012).

Google Apps for Education - Contains all the elements of Google Drive (documents, spreadsheets, presentations, forms, drawings) but also all the apps supported by Google Apps such as websites, videos, diagramming, and more, all under one free log-in account in the cloud (Mollica, 2014; Sultan, 2010).

Google Drive - Essentially it is a cloud-based app similar to Office 365. Google Drive is an individual-level tool and at its heart it's an online storage system for everyone (Null, 2014).

Information Revolution - also known as the Knowledge Revolution. It is fueled by personal computers, video games, the Internet, and cell phones. This revolution is at the same scale as the Industrial Revolution (Collins & Halverson, 2009).

Live@edu - Microsoft's version of Google drive but with Microsoft Exchange as its main email foundation. It is also a free cloud based Web 2.0 service. (Dessoff, 2010).

NETS - National Education Technology Standards. These standard are used to assess student, teacher, and administrator technology skills. The NETS are developed by ISTE (International Society for Technology Education) (Covili, 2012).

Project Based Learning - is a teaching/learning model that involves students in problem-solving tasks, allows students to actively build and manage their own learning, and results in students-built realistic deliverables. PBL is also a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks (BIE, 2014; Zafirov, 2013).

Science, Technology, and Society Movement (STS Movement) - an education movement that began in the 1960s in private New York Schools that became a mainstream movement for science and technology education in the United States (Cheek, 1997).