DEVELOPING STUDENT VOICE THROUGH TWITTER: USING MEDIA LITERACY EDUCATION TO INSPIRE CIVIC ENGAGEMENT

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DEVELOPING STUDENT VOICE THROUGH TWITTER: USING MEDIA LITERACY EDUCATION TO INSPIRE CIVIC ENGAGEMENT

BY

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A THESIS Submitted IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN EDUCATION

UNIVERSITY OF RHODE ISLAND

2018
MASTER OF ARTS THESIS

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2019
ABSTRACT

Public education in the United States must continue to connect the classroom with the mediated lives of students outside the classroom. Participation, particularly within social media platforms, provides tremendous opportunities for students but require the development of media literacies. Utilizing the New Media Literacies Framework (Jenkins, Purushotma, Weigel, Clinton, & Robison, 2006) to connect students with the educational goal of developing their voices and encouraging civic engagement may effectively prepare students to participate in democracy. Social media platforms provide students with an opportunity to become active participants in online communities. In addition, with the appropriate guidance, participation within social media platforms can facilitate the development of skills such as judgment, networking, and negotiation, all of which are beneficial to civic engagement.

This study examines the development of New Media Literacies in students from a career and technical high school, using the social media platform Twitter. Following the creation of career-oriented Personal Learning Networks on Twitter, students will be empowered to develop their professional voice. This study designed a pedagogical approach intended to develop student voice and encourage civic engagement. Through a mixed-methodology approach, student data including size and quality of their Twitter networks, work artifacts, engagement with the Twitter community, surveys, reflections and researcher field notes were examined. The students did demonstrate progress in developing voice and, in one specific participant, high levels of PLN engagement and a positive attitude towards civic engagement was demonstrated. The findings here suggest that NML’s can facilitate student engagement on social media platforms, which helps in the development of voice. The development of voice might in fact encourage higher levels of civic engagement amongst youth.
ACKNOWLEDGMENTS

I would like to thank my Major Professor, Dr. Jay Fogelman, for his support over these past three years. Your advice, insights, and the conversations we’ve had have challenged me to think empirically and put forth my best efforts. I’d also like to extend my gratitude to Dr. Renee Hobbs and Dr. Julie Coiro. Your work in advancing digital literacy throughout the country has called me to action. I can confidently say that my students are more critical thinkers, consumers, and makers of media because of your guidance. The Summer Institute in Digital Literacy has been enlightening and I look forward to continuing my work in this field.
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CHAPTER I

INTRODUCTION

On February 13, 2018, a mass shooting occurred at Marjory Stoneman Douglas High School, located in Parkland, Florida. Seventeen innocent members of that community lost their lives and an additional seventeen were wounded. This senseless act of violence became the deadliest school shooting in U.S. history and while the country mourned, the student survivors took action. Several survivors, including student Emma Gonzales, took to social media to advocate for their community and government inaction in passing legislation that could protect schools from the violence that they had endured. The students used social media, Twitter in particular, to control their narrative. As noted by journalist Jonah Engel Bromwich, of the New York Times (2018), the students’ persistent tweeting of stories, and other media, have kept their tragedy, and their intention to stop such shootings from happening elsewhere, in the news for weeks. These students used their voices, capitalized on the prominence of social media, and began to demand the changes they hope to see in our country. In this context, the students’ voice, magnified by social media, was a critical dimension of their civic engagement.

Statement of the Problem

Modern democracy in the United States is continuously played out through media. Politicians, interest groups and activists today can easily share a message on the internet that has the potential to reach millions of consumers at a very rapid pace. In addition, the
participatory nature of today’s internet (Jenkins et. al, 2006) provides citizens with the opportunity to become civically engaged without having to leave the comfort of their own home. Democracy, in this context, is a form of government that requires engagement from its citizens. As recognized by Diamond (2004), democracy is a system of government with key elements including the existence of free and fair elections, active participation of its citizens in politics and in the community, the value and protection of human rights, and the rule of law. Participation of its citizens necessitates that those citizens are informed and take advantage of their right to vote. In addition, a vital characteristic of democracy according to Diamond (2004), is civic engagement, which involves active membership in independent, non-governmental organizations. Modern civic engagement has been transformed by the internet and social media. It has expanded far beyond its traditional notions to include involvement in politics or activism online. Considering the role of the internet, and social media in particular, effective civic engagement requires media literacies. Therefore, in order to inspire civic engagement amongst youth, media literacy education is a necessity.

**Justification of Significance**

Considering the prevalence of social media in our society, there appears to be an opportunity to develop skills within students, particularly voice, that will promote their civic engagement. The research completed here is intended to design a pedagogical approach that does just that. Voice is complex to define but often emerges in writing when authors attempt to convey their viewpoint while being attentive to their content, purpose, and audience (Hobbs, 2017). As is recognized by Hobbs (2017), the concept of voice in media literacy has changed over time, and often has both personal and
professional intentions. In this study, voice is recognized as authentic self-expression of one’s beliefs or values. This study, as outlined below, aims to develop voice through facilitating the progression of students’ personal identity to a professional identity while participating in a specific community. It is intended that the development of voice will empower students while promoting their participation and online civic engagement; in turn, this civic engagement may transfer to offline contexts as well.

The students’ acquisition of their voice will be facilitated through the development of media literacies. Media literacy is recognized as a group of skills necessary to engage in the mediated world we live in. Definitions of media literacy often emphasize the ability to analyze, evaluate, and create media by intentionally using language and other techniques to relay a specific message (Hobbs & Frost, 2003; Masterman, 1985; Messaris, 1994). Buckingham, Banaji, Carr, Cranmer & Willett (2005) suggest that media literacy includes “the ability to access, understand and create communications in a variety of contexts” (p. 3). These literacies encourage continuous critical inquiry (Scharrer, 2002) of the messages we consume which, in our connected lives, is a frequent occurrence. Social media enables us to connect with a larger community and facilitates our democratic participation by offering opportunities to engage at home, or even on the go, with mobile technology. To engage in a meaningful way, however, demands the development of media literacies.

Enhancement of media literacies can promote civic and political engagement online (Kahne, Lee & Feezell, 2012). Given the participatory nature of the internet today, an understanding of how to communicate effectively and critically analyze the information consumed is not only relevant but vital. “These new avenues for engagement
offer vast opportunities for new and innovative approaches to teaching and learning about political engagement in the context of new media platforms and technologies” (Mihailidis & Thevenin, 2013, p. 1611). In order to successfully prepare students to engage in democracy, educators must be mindful of this new media landscape. Exposure to all aspects of civic participation is paramount, including the social media platforms that currently occupy students’ lives outside of the classroom and other social media platforms that they might not be familiar with yet. Twitter provides for an interesting platform due to its presence in current events. Additionally, a recent study (Park & Kaye, 2017) that examined the relationship between civic engagement and twitter found that “Twitter opinion leadership is significantly and positively associated with online civic participation” (p. 174). The users who are sharing or ‘tweeting’ more frequently are generally those who engage civically online because, one might generalize, they have developed a voice and understand how to advocate for their beliefs. The New Media Literacies (NML) Framework (Jenkins et al., 2006) provides a relevant structure to educate students about our participatory democracy and civic engagement. It is critical, though, that the online behaviors transfer into action offline.

The purpose of this study is to create a pedagogical approach, guided by the NMLs, intended to develop student voice using Twitter. This study is designed to develop NMLs within students through the creation of a Personal Learning Network (PLN) on Twitter. Through a project-based learning approach, students were guided in the development of their online, professional voice. Similar to the findings of a study conducted by Literat (2014), it is here hypothesized that an increase in participation on Twitter will result in higher levels of civic engagement.
CHAPTER 2

REVIEW OF RELATED LITERATURE

A review of literature reveals the beneficial relationship between media literacy and civic engagement. Mihailidis & Thevenin (2008) identify the close, conceptual relationship between media literacy and engaged citizenship in a participatory democracy, noting that the “ubiquitous media landscape today is providing numerous new avenues for engaged and active civic participation” (p. 1612). The opportunities to participate are countless, ranging from the engagement in political discussions online, sharing or liking content to promote their viewpoint, to signing petitions online or creating content that promotes a particular message. As determined by Masterman (1985) and applied to today’s media landscape (see Mihailidis & Thevenin, 2008), media literacy education is critical to a participatory democracy as it empowers citizens to think critically, create to communicate, and execute social change. Therefore, in order to prepare students for civic engagement and participation, media literacy education is key and educators have a great opportunity to expand students’ current online participation by helping to develop their ability to “communicate in their public voices about issues they care about” (Rheingold, 2008, p. 97).

Unfortunately, Jenkins et al. (2006), argue that there is “unequal access to the opportunities, experiences, skills and knowledge that will prepare youth for full participation in the world of tomorrow” which is also known as the “participation gap” (p. 3). In schools, this gap is enhanced through limitations placed on youth internet usage, which ultimately restricts full participation, especially for students who are only able to
access the internet at school (Jenkins et al., 2006; Felt, Vartabedian, Literat & Mehta, 2012).

Considering these limitations, Felt et al., (2012) examined the effects of participatory learning in an after-school program, specifically focusing on its ability to enrich the citizenship of high school students both online and offline. They define participatory learning as an environment in which all members are active and learning is accomplished by their collective efforts. In this research study Felt et al., developed an after-school program called Explore Locally, Excel Digitally (ELED), guided by underlying principles of the New Media Literacies Framework (Jenkins et al., 2006).

Twenty-five student participants were chosen and engaged in activities designed by the researchers to develop greater proficiency in digital tool use and new media literacy skills. Based on field observations, student reflections and final products, the researchers observed an increase in NMLs among many students who participated. Additionally, it was found that participants embraced the goal of creating a participatory culture within the program, which placed an emphasis on skills that enhance digital citizenship such as collective intelligence, negotiation, and performance (see Felt et al., 2012). Since both citizenship and digital citizenship require social competence and awareness of community, the researchers maintained that students might embrace the same citizenship ideas offline as well. Similarly, the research here will aim to identify the relationship between the development NMLs in students and civic engagement, but in a formal learning environment.

**Theoretical Framework**
The theoretical framework that guides this research comes from Jenkins et al. (2006), who examined the challenges presented in today’s participatory online culture. A participatory culture is identified as one in which it is fairly easy to express oneself artistically and engage civically. It facilitates creation and sharing those creations and new users are often guided by, or provided feedback from experienced participants. In a participatory culture, members create social connections with others and are confident that their contributions are significant. Participatory culture provides an ideal environment to develop civic engagement in students because it provides them with an empowering opportunity to connect with diverse communities, debate important issues, and gain an understanding of varying perspectives (Jenkins et al., 2006; Felt et al., 2012).

While this participatory culture provides for tremendous opportunity, there are obstacles that can limit, or even restrict, meaningful student participation. Jenkins et al., (2006) identify three core problems related to participatory culture: First is a participation gap, that recognizes that not all youth have equal access to the technology and online platforms. Second is a transparency problem, which is an assumption amongst adults that youth meaningfully reflect on their participation experiences and can describe their learning. Third, there is an assumption that youth can independently develop appropriate ethical norms that can be used to guide them through complicated online communities, also known as the ethics challenge. Media literacy education is required to overcome the obstacles identified above. Specifically, the 11 New Media Literacies (NMLs) described by Jenkins et al., (see Appendix A) should guide media literacy education so that students are adequately prepared to participate online.
This study specifically aims to develop student voice and civic engagement through the use of the social media platform, Twitter. Participants will use Twitter to create their own PLN, related to a career field they are currently pursuing as students at a career and technical high school. A PLN is an “informal group of likeminded people who share their knowledge and provide resources and advice to guide a learner in independent learning experiences” (Tour, 2017, p. 181). While the development of all eleven of the NMLs identified above is likely to enhance students’ online experiences, the limitation of time and specific goals focused on developing voice and civic engagement require a condensed, yet effective, framework. Therefore, the NMLs that primarily guide this research are Simulation, Performance, Judgement, Collective Intelligence, Appropriation and Negotiation. Others, like multi-tasking, were modeled throughout the unit but were not the focus of development. The incorporation of these elements into the design and data analysis of this study is further described in the methods section of this paper.

**Personal Learning Networks and New Media Literacies**

Educators deepen their practice through engagement in participatory learning environments known as Personal Learning Networks (PLNs). The size and structure of a PLN is something determined on an individual level but all participants look to gain some learning from the contributions of those in their network (Lalonde, 2012). A recent study conducted by Tour (2017) examined the experiences of three teachers who participated in a PLN. It was found that all participants employed skills, closely aligned with NMLs, to participate in an online PLN. Most frequently, Twitter was the online platform used. The participants used their PLNs for a variety of purposes such as the aggregation of relevant professional resources, cooperation, collaboration, reflection, and socializing. All
educators included in the study acknowledged professional growth as a result of their engagement in an online PLN. Considering the benefits to those in the education community, this research will aim to have students develop their own PLNs on Twitter. Students in this study, based upon their current Career and Technical Education (CTE) career area, will develop relevant PLNs on Twitter and use the NML framework to engage with their PLN.

**Student Voice**

The construct of student voice has been previously defined in its relationship to school reform (Carbonaro & Gamoran, 2002; Fielding, 2002; Mitra, 2003). In this context, however, student voice consists of students sharing their opinions of problems and potential solutions. “It could also entail young people collaborating with adults to actually address the problems” that they encounter (Mitra, 2004, 651). Encouraging students to engage in their PLN, while following a pedagogical approach that advances NMLs through the use of social media is intended to develop student voice. In an essay on digital media and youth participation in politics, Kahne & Middaugh (2012) maintain that social media provides an opportunity for youth to shape the flow of information and to be creative. Interest driven online communities can teach valuable skills. Therefore, educators must “find ways to create educational spaces that mirror those features – spaces where youth interact as part of communities, working collaboratively on topics of common interest and creating content for an audience (Kahne & Middaugh, 2012, 55). As recognized by Charteris & Thomas (2017), students are “active meaning makers capable of acting on their own interests and contributing unique and valuable perspectives (167). Exposing students to individuals with the same interests through participation in a PLN
may enhance the students’ expertise in their specific career field and encourage them to use their voice to relay their opinions and solutions on relevant problems.

**Attitudes Towards Civic Engagement**

In a recent study conducted by Literat (2014), it is acknowledged that the development of media literacies does not always lead to active production of original media. However, there is a lack of tools to measure NMLs as well as the attitudes, or desire to share one’s own thoughts or opinions online. Literat therefore created and validated a questionnaire intended to measure “both online and offline behaviors, in accordance to the NML framework, which views new media literacies as social and cultural skill sets” (Literat, 2014, 16). The questionnaire was intended to examine the relationship between media exposure and NMLs. It was found that individuals with more media exposure had higher comprehension of NMLs and participated more online. Additionally, the element of civic engagement was included as an offline type of affiliation and it was found that respondents with higher levels of civic engagement also had stronger NML skills. This study employs a similar survey intended to measure the relationship between NMLs and attitudes towards civic engagement. It is hypothesized that students with stronger NMLs will have a stronger desire to participate online and a more positive attitude, or desire, to engage civically. In other words, a higher level of NMLs will correlate to not just the development of voice but the desire to use it.

**CHAPTER 3**

**METHODOLOGY**
The study design has employed a mixed-methods approach to answer the following research questions:

1. At what levels do students engage with the Twitter community?
2. How is student voice impacted while participating in an online learning network?
3. How do students use Twitter to become professionally and civically engaged?
4. What are students’ attitudes towards online and offline civic engagement after using Twitter to explore using their voice online?

The researcher, who is also the students’ teacher, guided the students in their development of the NMLs while engaging with Twitter and creating a PLN within the larger community. The intention was to demonstrate to students how to communicate authentic messages to a specific audience (how to use their voice online). As described in the procedure below and Appendix B, students engaged in several activities that were intended to scaffold levels of participation on Twitter. Data was then collected from the students’ tweets and work products, in addition to researcher observations, and a student survey. Student engagement with Twitter and participation in a PLN as well as their overall perceptions, or attitudes towards online and offline civic engagement is examined below in the findings section of this thesis. Student attitudes towards civic engagement in this case is defined by their interest in civic engagement as well as their belief in its effectiveness, as measured by the survey in Appendix E. This varies from the students’ actual civic engagement, which will be measured by their Twitter activity. The researcher specifically focuses on whether or not high interest in civic engagement translates to actual civic engagement online.

**Participants and Setting**
This mixed-methods research study explores the effects of introducing online civic engagement strategies in a high school classroom. Participants consist of 16 students from an 11th grade Advisory (advisory is synonymous with class at a traditional high school) at a Career and Technical High School in Rhode Island. It is a heterogeneous group of students, including 10 male and 5 female students from different backgrounds. Selection of these students was not random as they are students in the researcher's own Advisory. The researcher was an active participant in this study as the teacher (also known as the Advisor). A mixed-methods approach was selected to limit the subjectivity of the researcher, as the quantitative survey results will be used to support the findings of the qualitative analysis. The unit of study took place over the first trimester in the 2018-2019 school year. An overview of the unit (Appendix A), including lesson plan outlines, demonstrates the sequence and topic of instruction.

The high school setting is a non-traditional career and technical education program. Students who attend are encouraged to pursue their passions, and attend internships related to their passions two days per week. Their learning is guided by their experiences and demonstrated through the completion of projects that are relevant to their interests, academically challenging, and authentic to their internship site. Student learning is not assessed using a grading system; instead, students design career-oriented learning objectives with the assistance of the Advisor and showcase their work at the end of each trimester. Participation will not be mandated and grades, due to the structure of the school, would not be impacted if the student(s) chooses to be excluded from the data collection.

Procedure
This is an embedded mixed-methods research study in which the qualitative data collected on student familiarity with the NMLs and attitudes towards civic engagement is intended to support the quantitative data collected. Through the development of the six NMLs previously identified, and with the support of the Twitter platform, the researcher has analyzed the development of student voice and attitudes towards online and offline civic engagement. The materials required for this study are typical to what is found or available in the classroom, including computers (for access to Twitter). All students in this study currently possess a school assigned Chromebook.

This research was conducted as a 10-lesson unit of study, outlined in Table 1.

<table>
<thead>
<tr>
<th>Lesson Topic</th>
<th>Objectives &amp; Activities</th>
<th>Student Products &amp; Data Collection</th>
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| Introduction to Twitter | 1. To learn about the social media platform  
2. To discuss internet safety  
3. To set norms for our Advisory’s use of Twitter  
Activities: Explore who is uses Twitter and for what purposes. Discuss the use of hashtags. Introduce our Twitter project. Collectively develop norms for Twitter use.  
NMLs: Judgement, Collective Intelligence | 1. Student Reflection: Can answer the following prompts or something meaningful that they would like to share.  
Prompts: What are some pros and cons of Twitter? How might you imagine yourself using Twitter?  
2. Weekly field notes |
| **Creating a Twitter Profile** | 1. To develop a professional Twitter profile.  
2. To understand digital citizenship and representation.  

Activities: Explore types of professional Twitter profiles. Analyze the idea of representation and discuss positive attributes and negative consequences. Share examples of teen representation on other social media platforms. Ask students to describe how they would like to represent themselves on Twitter and what that might look like.  

NMLs: Judgement, Negotiation | 1. Student Twitter accounts  
2. Weekly field notes |
| **Twitter Exploration** | 1. To develop an understanding of the content found on Twitter.  
2. To learn how to critically analyze sources and information.  

Activities: Explore what is ‘trending’ for the day/week. Discuss the tweets we are seeing, who the authors are, what are their motives, how have they chosen to share communications and why was that method chosen. Discuss how multiple contributions are adding to one story. Students will be encouraged to engage with their current Twitter community (following the norms previously set).  

NMLs: Judgement, Performance, Simulation | 1. Weekly field notes  
2. Student twitter activity |
| **Developing a Personalized Twitter Community** | 1. To begin to meaningfully engage with an online community.  

Activities: Students will explore the benefits of a Personalized Learning Network (PLN) and begin to create their own based upon their career interests. They will evaluate the information being shared and begin engaging: retweet, like, use relevant hashtags. Read to create your own relevant messages. Students will create a *Twitter web* that depicts their Twitter community (personal interests, professional interests, followers)  

NMLs: Judgement, Performance, Appropriation | 1. Student Reflection  
Prompt: Discuss your experience using Twitter so far. What has been challenging? What has been interesting? What do you look forward to?  
2. Weekly field notes  
3. Student twitter activity  
4. Student *Twitter web* |
**Identifying Career Development Opportunities**

1. To use Twitter as a means to find relevant resources that expand career knowledge.
2. To understand what individuals in their career field are Tweeting.

Activities: Independently, students will analyze their Twitter communities on a daily basis in search of trending resources. They will track what they are finding - can choose from Google docs, Google slides, Padlet, or use their current blogs. Group discussion on what students are finding. Troubleshooting any issues students may be encountering.

NMLs: Judgement, Collective Intelligence, Simulation, Performance

**Contributing to their PLN**

1. To share their own, evidence-based opinions on career related concepts/issues/current events

Activities: Students will create tweets that share their ideas on career related concepts/issues/current events. All tweets will be based on evidence found in their previous research.

NMLs: Judgement, Collective Intelligence, Performance

**Creating & Distributing Media Messages**

1. To learn how to express oneself using media
2. To develop an understanding how to engage civically online.

Activities: Students will create a mediated message that expresses their professional opinion on a career related concept/issue/current event that they’re interested in. The mediated message will then be tweeted out to their PLN. In order to attract the appropriate audience, they will need to examine how others are sharing similar messages and develop one accordingly. Students will observe how their message is received (being provided with support from advisor in case of negative receptions) and reflect on their experience.

NMLs: Appropriation, Negotiation, Simulation, Performance

**Conclusion**

1. To understand students’ new experiences with NMLs and attitudes towards Civic Engagement

Activity: Student survey

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**Table 1: Twitter PLN Unit of Study**
Once introduced to the Twitter community, students were tasked with using the platform to create a PLN. In the education community, Twitter has been recognized as a platform that facilitates professional learning amongst teachers and school leaders (Carpenter & Krutka, 2014; Cho, 2016; Forte, et al., 2012). Though commonly associated with the education community, a PLN can be used in any career field to inspire innovation and professional growth. As students who are experiencing internships in real-world settings through a unique career and technical education program, participants of this study will benefit from the creation of a PLN as it will set them up for success in an evolving world.

As the PLNs were being developed, the researcher encouraged the students to use performance and simulation to create a professional online identity and interact with other users. The development of judgement was intended to empower students to identify credible users and reliable information. Encouraging students to connect with experts in their areas of interest and engage in conversation with them was designed to exemplify how they can use collective intelligence to reach a common goal. Students were challenged to find a variety of social communities related to their interests so that they can understand diverse perspectives and combine ideas to formulate their own knowledge. They were then asked to develop their own opinions on career-related topics and explore how to express their opinions, examine how others may have communicated similar messages (appropriation), and ultimately, share their message with the Twitter community. Negotiation will assist the students in understanding diverse perspectives should their message be interpreted or received differently than anticipated. The unit outline provided in Appendix A more specifically details how the NMLs framework guided student exploration.
Researcher observations were completed on a weekly basis immediately following the introduction to the project. Once students were introduced to the project, the group explored the social media platform Twitter (purpose and functionality) and all students created their own accounts. To ensure confidentiality, students were not permitted to use their real names as their account names, also known as Twitter handles. The students then explored representation and digital citizenship and, as a group, defined norms for Twitter engagement. The researcher/advisor set forth additional parameters to ensure safe social media usage. With the support of the researcher/advisor, students were encouraged to engage with Twitter in activities that were intentionally designed to develop the NMLs of simulation, performance, judgement, collective intelligence, appropriation, and negotiation. For example, students were challenged to use Twitter as a means to find resources that will deepen their professional knowledge. Collective intelligence and judgement in particular was intended to help the students locate resources outside of Twitter and examine the information they are consuming with a critical lens (Hobbs, 1998). As the students began interacting on Twitter, data collection surrounding their levels of participation (see Appendix C) also began, which will be described in the next section.

A foundational understanding of Twitter enabled the participants in this study to explore using the platform for professional growth. The pedagogical approach employed by the researcher focused on facilitating student's development of PLNs. An individualized approach was required as the students have varying career interests, but the NMLs guided instruction. Student participants engaged in activities that encourage them to evaluate their PLNs, contribute to relevant discussions, and actively seek out
resources to expand their professional knowledge, all while maintaining a professional Twitter persona. Participants were asked to reflect upon their experiences on a bi-weekly basis, which contributes to the researcher’s qualitative data set. As Mihailidis & Thevenin (2012) argue, “a truly participatory democracy relies on citizens’ efforts to develop and share their unique perspectives on societal issues, as well as develop new approaches to creating and circulating these perspectives” (p. 1615). Consequently, as a culminating activity, the researcher challenged participants to create a relevant message that summarizes something they’ve learned through their Twitter experience and share it with their PLN. Participants were encouraged to examine how their message was received.

At the end of the unit, each student shared their Twitter analytics data (see example in Appendix D) with the researcher. Similar to previous studies that examined the relationship between new media literacies and civic engagement (e.g. Felt et al., 2012; Kahne et al., 2012; Literat, 2014), this study examines the sense of civic engagement that the youth possess.

*Quantitative Collection of Data*

From a quantitative perspective, descriptive data on the students’ Twitter community, tweets, and a student survey have been collected. In order to evaluate the levels of student participation on Twitter, information on the size and quality of their Twitter community was gathered (see Appendix C). Through an analysis of the information the researcher is seeking to understand if, as they develop NMLs, the students begin to create a professional identity on Twitter or if they predominantly engage on a personal level. This is measured based on the following: 1. *Size of the*
community - how many accounts are they following and how many followers do they have? 2. Quality of the community - are they following professional associations or accounts based on personal interests? 3. Level of participation within the community - how frequently are they liking tweets, retweeting, or generating their own tweets? The researcher will use these scores to determine if students are simply liking, retweeting, or actually generating their own tweets. Movement from liking to originally generated content would suggest the development of voice. In addition, Twitter analytics (see Appendix D) will be used to provide a content analysis of the tweet (is it a personal or professional tweet) and the community it is reaching (based on impression, engagement, and engagement rate). Finally, a student survey (see Appendix E) will be used to measure student attitudes towards civic engagement once the unit of study has concluded.

**Qualitative Collection of Data**

Qualitative data in this case is used to support the quantitative findings. From a qualitative perspective, data was collected through the examination of student products and reflections as well as researcher field notes to describe student attitude towards civic engagement as specific NMLs are developed through their work with Twitter. The researcher completed field notes once per week to capture student experiences during the unit of study. In addition, the students were asked to complete written reflections of their experiences during the unit of study. These reflections as well as their additional student work products (tweets and media messages) contribute to the qualitative data.

**Data Analysis**

The data was then analyzed based on the process outlined in Appendix F. To answer the research questions, the following data was examined.
At what levels do students engage with the Twitter community?

To answer the first research question related to the levels of student engagement within the Twitter community, the researcher examined the Twitter data that quantifies how many likes, re-tweets, and originally generated tweets each student produced. Students that began with creating an account to liking content and on to producing originally generated content will indicate development of voice.

How is student voice impacted while participating in an online learning network?

To examine how student voice was impacted through the participation of a PLN, the researcher again utilized the levels of participation. These findings were then compared to the researcher field notes, student tweet content, and student reflections.

How do students use Twitter to become professionally and civically engaged?

Qualitative and quantitative data was necessary to answer the third research question. Again, levels of participation was examined here and compared to a quantitative analysis of the students twitter network. Professional and personal connections in the networks were considered. Student reflections were coded to quantify professional development.

What are students’ attitudes towards online and offline civic engagement after using Twitter to explore using their voice online?

Survey data was compared to the content of student tweets to provide insights about students’ attitudes towards civic engagement. The instrument created Literat (2014) was slightly modified and distributed as a survey to student participants here. The relationship between NMLs and desire to civically engage both online and offline was examined. Finally, triangulation of the qualitative and quantitative data sets not only
describes how students use Twitter to become professionally and civically engaged; it helped to reduce any bias within the findings as well.

CHAPTER 4

FINDINGS

The data in this study was collected over a 3 month timeframe, in which 10 total lessons on Twitter and PLN’s, were facilitated by the researcher. The findings that follow represent a summary of both the quantitative and qualitative data collected.

At what levels do students engage with the Twitter community?

All 16 of the participants created Twitter accounts with handle’s, or username’s, that related to their career interests, but concealed their identity. The students’ networks varied in size and quality (see table below). The levels of participation on Twitter were of primary interest in this research. As previously described, there are five levels of participation (see Table 2).

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Creation of an account.</td>
</tr>
<tr>
<td>2</td>
<td>Building a network.</td>
</tr>
<tr>
<td>3</td>
<td>Liking the content posted by other users.</td>
</tr>
<tr>
<td>4</td>
<td>Re-tweeting content from other users.</td>
</tr>
<tr>
<td>5</td>
<td>Posting originally developed tweets.</td>
</tr>
</tbody>
</table>
Moving up from participation level 1, the simple creation of an account, to level 5 where the student is posting original content, suggests the development of voice. The network size and levels of participation for each user are indicated in Table 3. Over the 10 class unit of study, the students liked an average of 8 tweets from other users, re-tweeted and average of 3.2 tweets from other users and composed an average of 2.25 original tweets. As the levels of participation increased, the number of engaged students decreased. The majority of the students, 14 out of 16, engaged with Twitter on a weekly basis and 1 participant identified as engaging with the platform on a daily basis. This student in particular had the highest levels of participation with 9 likes, 3 re-tweets, and 14 originally developed tweets.

<table>
<thead>
<tr>
<th>Student</th>
<th>Size of Network</th>
<th>Number of Likes</th>
<th>Number of Re-Tweets</th>
<th>Number of Original Tweets</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>41</td>
<td>9</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>33</td>
<td>13</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>20</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>D</td>
<td>36</td>
<td>21</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>46</td>
<td>18</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>G</td>
<td>55</td>
<td>9</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 3: Student Engagement and Participation

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>19</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>69</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>J</td>
<td>37</td>
<td>19</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>K</td>
<td>30</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>L</td>
<td>45</td>
<td>5</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>M</td>
<td>76</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>9</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>O</td>
<td>77</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

To initiate discussion on student use of the social media platform Twitter, students were asked to respond to the prompt “Do you currently use Twitter? What are some pros and cons of Twitter”. All of the students could describe Twitter to varying degrees of depth but only one student in the group had an account and admitted to infrequent usage. The overwhelming majority of students perceived Twitter as a negative social networking environment. A few responses are included below.

“I like looking at the memes on Twitter but don’t see how it can be useful otherwise”

“I am not on Twitter but I think it’s just a place for bickering if you don’t agree with someone”

“My understanding of Twitter is that it’s just a bunch of fake accounts used to trick people into believing fake news. I do not see how it could be used for positive things”

Students were then introduced to Twitter and were encouraged to explore who is using Twitter and their purposes. Norms for using Twitter were established and the Twitter
project was introduced to the class. During the following lesson, students created their own Twitter accounts and the researcher facilitated a discussion and group examination into representation. Researcher field notes following this lesson indicate high levels of engagement from the entire group. The researcher specifically noted that the students’ understanding of representation was more comprehensive than it was assumed to be.

**How is student voice impacted while participating in an online learning network?**

Students were encouraged to analyze their PLNs on a daily basis but researcher observations indicate that many students were not meeting these expectations as students are only in school three days and out in internships the remaining two days of the school week. Despite not meeting this expectation, students still analyzed their Twitter communities. The most frequent form of analysis expressed was evaluation of a particular user or content found on Twitter. For example, one student commented on they bias they identified in an article shared by Vice News. Another student, with an interest in game development, commented on the in-depth debates occurring within the video game community. This student recognized that the opinions shared by some users were not evidence-based and they acknowledged the need to diversify their network.

Throughout the unit, the researcher notes indicate that students were not taking part in as many discussions as hoped. However, class discussions indicated that the students were consuming a great amount of information.

The final task was assigned to the students in which they were urged to create a mediated message that expresses their opinion on a career related concept or current event. Most of the students, 13 out of 16, completed this assignment. Final products
ranged from a simple tweet to a more developed, originally created, graphic. To protect student privacy, the actual tweets will not be published in this thesis.

How do students use Twitter to become professionally and civically engaged?

The student with the largest network in this study followed 75 users and had 2 followers. Of those 77 in this student’s network, 76 were classified as professional connections and only 1 was classified as a personal connection. In this context, a professional connection is a user who belongs to the student’s career field of interest or a user who can provide current events related to the students’ interest, including news outlets. Personal connections are those who do not provide information relevant to the students career interest, including but not limited to friends and celebrity entertainers. The students, with the support of the researcher, classified the users in their networks. Contrastingly, the student with the smallest network followed only 5 other users and had 0 followers. Of those in this students’ network, 3 were classified as personal connections. The average network size for all participants was 38.3 and 95% of the total network size was classified by the students as professional connections.

Students were introduced to PLN’s and were provided with examples on how Twitter can be used as a PLN. Researcher field notes indicate that a few students were apprehensive in identifying who might be worth following as it relates to their career interests but once the students began searching, engagement levels rose. Students created graphics of their PLN’s and example is provided in the Figure 1.
In the example shown, not only did the student follow professionals in their career field, but sent introductory messages. The student received several brief responses, opening lines of communication with the professionals. Interestingly, over the three-month unit of study, this student had 0 likes, 0 re-tweets, and 0 originally created tweets. The researchers notes from this portion of the unit indicate surprise that the students’ networks predominantly consisted of professional connections, rather than personal connections.

As the unit continued, the students were asked to describe their experiences using Twitter. Responses were varied as 9 out of the 16 students indicated a perceived benefit to using Twitter. The student quote below is representative of this grouping of students.

“I really like going on and seeing what people in my career field are up to. Some have been sharing their most recent work and I think this is something I would like to do in the future.”
However, the remaining students did not see the immediate benefit to participating in a PLN on Twitter. Researcher field notes during this portion of the unit of study indicate that student comments and discussions seem to surround current events more than career-related tweets.

Upon completion of the unit, the students were asked to reflect upon their experiences in using Twitter to develop PLN’s. All 16 students indicated a favorable learning experience as reflected in the following examples.

“I was not convinced that Twitter would help me in my career but I’m finding it helpful. I’ve been following companies I hope to work for some day and think that this could help me prepare for interviews once I graduate.”

“At first the only things I liked were animal videos but when I started to search more I found a lot of people that could help me. There are a lot of issues I had no idea about before.”

Researcher notes and student feedback indicate that continued usage of Twitter and time spent developing PLN’s is desired.

**What are students’ attitudes towards online and offline civic engagement after using Twitter to explore using their voice online?**

In addition to quantitative data collected from Twitter usage, the students were asked to share their attitudes towards civic engagement through the completion of the survey found in Appendix E. As previously indicated, civic engagement involves active membership in independent, non-governmental organizations. Civic engagement not only incorporates politics and activism but can also facilitate career development through the
participation in career-related organizations. The survey was administered as the final activity of this unit of study and 13 out of the 16 participants completed the survey. The survey first asked students to quantify their use of computers, the internet, and social networking sites including Facebook, Twitter, Snapchat and Instagram. All 13 students have access to computers and the internet at home. The majority of students identified that they spend at least 7 hours per week using the internet for school or internship related purposes. Additionally, 10 out of 13 students identified using the internet at least 7 hours per week for personal use. YouTube was the most frequently used social networking platform amongst this group followed by Snapchat, Instagram, Twitter, and least of all, Facebook. In regards to civic engagement, 2 of the 13 respondents identified that they strongly believe they can make a difference in their community. One of these students was also the student with the highest level of participation on Twitter (14 tweets, 3 retweets, and 9 likes). The same students identified that they know how to advocate for social or political change online. Additionally, 4 of the 13 felt more confident in their abilities to advocate for social or political change online than they do offline. However, none of the respondents identified themselves as being an activist.

CHAPTER 5

DISCUSSION
Journell, Ayers, & Beeson (2013) contend that American K-12 education has ignored the potential offered by social media in its ability to facilitate civic engagement. The intent of this study was to develop student voice, using Twitter, and inspire civic engagement.

At what levels do students engage with the Twitter community?

Similar studies (Journell, Ayers, & Beeson, 2013) have found that when students are asked to engage with Twitter as part of a school project or activity, the majority of their interactions will be specifically related to that assignment. Similar engagement levels were found here in that Twitter usage did not take place for most students outside of the requirements of this unit of study. A study conducted by Gleason (2018), collected Twitter data from students over a two-year time span and found, particularly with one student, that Twitter usage developed from orientating practices (learning how to use the platform and defining themselves as a Twitter user) to reflective emergence over this extended time frame. It is suspected that continued Twitter usage by the student participants in this study might yield similar results. Therefore, from an educational standpoint, Twitter offers a unique and engaging platform for students to practice digital literacies while developing voice. However, in order to maximize results and student learning, consistent and extended time with the platform should be provided and the objectives must be supported with alternative classroom activities as well.

How is student voice impacted while participating in an online learning network?
The quantitative results demonstrate that, while significant development of voice was not achieved, a progression did occur. When considering the five levels of engagement as described above, all students achieved the first two levels by creating an account and developing a network. The majority of students, 13 out of 16, engaged by liking a post, 11 continued on to re-tweeting, and 13 students created and posted original tweets. As previously defined, voice is recognized as authentic self-expression of one’s beliefs or values. This study intended to develop voice through facilitating the progression of students’ personal identity to a professional identity while participating in a specific community. The progression described above, from simply establishing an account to creating and publishing an original tweet, demonstrates the development of voice. Over the three-month period in which this study took place, progress in developing student voice was made but additional and consistent time is needed to continue to develop student voice and engagement in a PLN.

Researcher observation notes throughout the unit indicate high levels of engagement in classroom discussions during the class’ work with Twitter. This engagement, however, is not supported within the quantitative data on total number of likes, re-tweets, and tweets. This finding is similar to other research on engagement in social networks. Tagarelli and Interdonato (2014) describe this phenomenon as “lurking” in which members of a community remain quiet while watching, reading, or otherwise benefitting from the information or services provided by others. They further maintain that the degree of active participation positively correlates with the level of community-oriented knowledge. The findings in this research support that contention, as the students are novices in their field of interest. Therefore, while they are still observing, reading, and
benefitting from the information shared by others, the students may not have developed the confidence to independently contribute at this time. Similarly, it has been reported that only 44% of all people who have signed up for Twitter have ever sent a tweet (Sherman, 2014).

**How do students use Twitter to become professionally and civically engaged?**

In this study, the students’ personal connections only accounted for 5% of their total network. This indicates that students in this study were specifically focused on developing their professional persona and suggests that the students successfully employed the NML’s of simulation, performance, and judgement when using Twitter. Student reflection responses indicate that they did realize a professional benefit to utilizing Twitter. Specifically, it was noted by one student that they enjoy seeing what is current amongst the professionals in their field and hope to use Twitter in the future to share their own work. Additionally, researcher field notes indicated several times throughout the study that students were more interested in discussing the current events they found on Twitter than any career-related information. This interest should be explored in future studies as it relates to the development of civic engagement in youth.

**What are students’ attitudes towards online and offline civic engagement after using Twitter to explore using their voice online?**

The development of media literacies and opinion leadership directly relates to enhanced civic engagement (Kahne, Lee & Feezell, 2012; Park & Kaye, 2017). This is exemplified when specifically examining the activities of student ‘N’ in this research
study. When referring back to Table 3, one can see that this student had the highest level of participation on Twitter with 9 likes, 3 re-tweets, and 14 originally created tweets. The quality of this students’ network was strong with 38 professional connections and 6 personal connections. The quality of the student’s tweets, however, stands out when compared to their peers. When evaluated using the rubric found in Appendix B, 8 out of the 14 originally generated tweets from the student ‘Exceeded Expectations’. These tweets consisted of relevant, evidence-based information or original viewpoints. The student applied the Twitter conventions effectively and includes hyperlinks to a variety of media that supports or deepens the idea of the tweet. Of the remaining 6 tweets, 4 met expectations while 2 were developing. Additionally, when examining students’ attitudes towards civic engagement, this student was the only one who selected ‘strongly agree’ or ‘agree’ when answering questions directly related to civic engagement. A sample of their responses is included in Table 4.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe I can make a difference in my community</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>It is my responsibility to be actively involved in local, state, or national issues that may impact me.</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I have volunteered volunteered in my community outside of school assignments.</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I look forward to turning 18 so that I exercise my right to vote.</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I stay informed on current events and politics.</td>
<td>Agree</td>
</tr>
<tr>
<td>I know how to advocate for change on political and social issues online.</td>
<td>Agree</td>
</tr>
<tr>
<td>I know how to advocate for change on political and social issues offline.</td>
<td>Agree</td>
</tr>
</tbody>
</table>
Table 4. Student N Survey Results

Based on these survey responses once can conclude that this student had a more positive attitude towards civic engagement than their peers in addition to the highest level of engagement on Twitter.

CHAPTER 6

CONCLUSION

Civic engagement is vital to the success of a democracy (Diamond, 2004). Civic engagement involves the active membership or contribution to non-governmental agencies. In today’s mediated world, civic engagement is accessible to wider audiences. Social media can be used to facilitate civic engagement but in order to appropriately participate in this mediated world, media literacies are required.

The purpose of this research study was to develop NML’s within a group of 16 high school students in order to encourage the development of voice, and inspire civic engagement. A progression in the levels of voice was observed in all participants. In one case in particular, a high level of engagement was demonstrated and this same student expressed the most positive attitude towards civic engagement. This suggests and continued development of voice and engagement within a PLN may inspire civic engagement.

Implications for Curriculum and Future Research

The development of media literacies has been identified as a key component to civic engagement in a participatory democracy (Felt et al., 2012; Kahne et al.,2012;
Literat, 2014; Mihailidis & Thevenin, 2013; Rheingold, 2008). As developing student voice and encouraging civic engagement is a priority in public education, it seems logical that Jenkins’ new media literacies framework (2006) can guide instruction aimed at reaching this important goal. The results of this study are intended to inform school leaders and educators on the usage of social media platforms to develop both online and offline civic engagement and participation. The 10 lesson pedagogical approach appears to be a good start, but consistent and prolonged work in this realm is recommended and would be a good case to study for the future. Due to the high levels of student interest when discussing current events found on Twitter, it is recommended that this pedagogical approach be amended for future use to specifically focus on current events and news literacy. In addition, this research made an assumption that students would engage with Twitter on a professional level shortly after creating Twitter accounts. Students, as novices in their career fields, hesitated to engage. Future research may want to explore engagement from a familiar topic, such as pop culture, first and then examine if these engagement levels transfer over to the professional realm. While the case study lacks generalizability due to the small sample size and unique instructional environment, it is hoped that the results of this research can provide a pedagogical approach in teaching students about civic engagement in our participatory democracy.
### APPENDICES

Appendix A

*New Media Literacies*

<table>
<thead>
<tr>
<th>Ability</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play</td>
<td>Using free-form experimentation to problem solve.</td>
</tr>
<tr>
<td>Simulation</td>
<td>The ability to understand and build fluid models of real-world processes and systems.</td>
</tr>
<tr>
<td>Performance</td>
<td>Taking on alternative identities for the purposes of exploration and discovery.</td>
</tr>
<tr>
<td>Appropriation</td>
<td>The ability to sample and remix media content in a meaningful way.</td>
</tr>
<tr>
<td>Multi-tasking</td>
<td>The ability to scan the media content in a way that allows one to identify and focus in on the important details.</td>
</tr>
<tr>
<td>Distributed Cognition</td>
<td>The ability to use tools so that they develop intelligence.</td>
</tr>
<tr>
<td>Collective Intelligence</td>
<td>The ability to combine knowledge and the thoughts of others towards the accomplishment of a specific goal.</td>
</tr>
<tr>
<td>Judgement</td>
<td>The ability to evaluate the reliability of different sources.</td>
</tr>
<tr>
<td>Transmedia Navigation</td>
<td>The ability to sort through a variety of media types, or modalities, to gain understanding on a specific topic.</td>
</tr>
<tr>
<td>Networking</td>
<td>The ability to research, construct meaning from and share information.</td>
</tr>
<tr>
<td>Negotiation</td>
<td>The ability to experience diverse communities while understanding and respecting varying perspectives and constructively work through conflict.</td>
</tr>
</tbody>
</table>
Tweet Rubric

<table>
<thead>
<tr>
<th>Community</th>
<th>In Progress</th>
<th>Meets Expectations</th>
<th>Exceeds Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>User has not developed a community with a good mix of professional and personal accounts (50/50). Or, user only follows accounts related to their personal interests.</td>
<td>User has developed a community consisting of 50% personal interest related accounts and 50% professional interest related accounts.</td>
<td>User has a substantial PLN with both personal-related and career-related accounts being followed.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engagement</th>
<th>In Progress</th>
<th>Meets Expectations</th>
<th>Exceeds Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>User infrequently engages with their Twitter community. Less than 25% of engagement is their own, originally generated tweets.</td>
<td>User consistently engages with their Twitter community. Approximately 50% of all engagement is their own, originally generated tweets.</td>
<td>User engages with Twitter on a daily basis. 75% or more of that engagement is their own, originally generated tweets.</td>
<td></td>
</tr>
<tr>
<td>Tweet Content</td>
<td>User’s tweet content does not consist of relevant, evidence-based information or original viewpoints.</td>
<td>User’s tweet content consists of relevant, evidence-based information or original viewpoints. User applies the Twitter conventions of @ and # effectively.</td>
<td>User’s tweet content consists of relevant, evidence-based information or original viewpoints. User applies the Twitter conventions of @ and # effectively. Additionally, user includes hyperlinks to a variety of media that supports or deepens the idea of the tweet.</td>
</tr>
</tbody>
</table>
Appendix D

Twitter Analytics Data Collection

Participant level data

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Gender</td>
<td>Male, Female, Other, Prefer not to say</td>
</tr>
<tr>
<td>Student Career Cluster</td>
<td>The career cluster the student has defined based on RI CTE standards.</td>
</tr>
<tr>
<td>Size of Twitter Community</td>
<td>Numeric value. Number following and number of followers.</td>
</tr>
<tr>
<td>Quality of Twitter Community</td>
<td>Based on total community size (followers and following), number of professional relationships (aligned with CTE career cluster) and number of personal relationships.</td>
</tr>
<tr>
<td>Frequency of engagement</td>
<td>How frequently is the student participating on Twitter (ie: daily, weekly)</td>
</tr>
<tr>
<td>Level of engagement</td>
<td>How many likes?</td>
</tr>
<tr>
<td></td>
<td>How many retweets?</td>
</tr>
<tr>
<td></td>
<td>How many originally crafted tweets?</td>
</tr>
</tbody>
</table>

Tweet level data
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tweet ID</td>
<td>ID number assigned by Twitter</td>
</tr>
<tr>
<td>Text</td>
<td>The full text of the tweet</td>
</tr>
<tr>
<td>Content quality</td>
<td>Was the tweet professional (relevant to their CTE career cluster) or personal?</td>
</tr>
<tr>
<td>Impression</td>
<td>Number of times users saw the tweet</td>
</tr>
<tr>
<td>Engagement</td>
<td>Total number of times a user has interacted with the tweet</td>
</tr>
<tr>
<td>Retweet</td>
<td>Number of times the tweet was re-shared by a member of the twitter community.</td>
</tr>
<tr>
<td>Replies</td>
<td>Number of times someone directly responded to the tweet</td>
</tr>
<tr>
<td>Likes</td>
<td>Number of times member(s) of the twitter community selected the heart icon, indicating agreement with the content of the tweet</td>
</tr>
</tbody>
</table>

*Data will be pulled from the Twitter analytics function each user has access to*
Appendix E
Attitudes Towards Civic Engagement

Demographic Information

Gender: Male Female Other: ____________ Prefer Not to Say

Ethnicity: White
Hispanic
African-American
Asian
Native American
Pacific Islander
Other: ____________

Digital Participation

Do you have a computer at home? Yes No
Do you have internet at home Yes No

How many hours a week do you spend:

a. On the internet for school or work 0-3 4-6 7-10 10+
b. In your free time 0-3 4-6 7-10 10+
c. Reading books, magazines or print news 0-3 4-6 7-10 10+
d. Playing games (online, cell phone, xbox, etc.) 0-3 4-6 7-10 10+
On average, how many hours a week do you spend on:

<table>
<thead>
<tr>
<th>Activity</th>
<th>0-3</th>
<th>4-6</th>
<th>7-10</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Facebook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Twitter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. YouTube</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Instagram</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Snapchat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Online groups (ex: Google groups)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Blogging for personal use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Podcasting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Other online activities: Specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How often do you create projects that use video, audio, music, photographs, etc. outside of school work, in your free time?

<table>
<thead>
<tr>
<th>Frequency</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Often</td>
<td></td>
</tr>
<tr>
<td>b. Sometimes</td>
<td></td>
</tr>
<tr>
<td>c. Rarely</td>
<td></td>
</tr>
<tr>
<td>d. Never</td>
<td></td>
</tr>
</tbody>
</table>

Civic Engagement

*Note: For all the questions below, the possible answers were: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree.*

- I believe I can make a difference in my community.
• I know how to advocate for change on political and social issues online.
• I know how to advocate for change on political and social issues offline.
• I know which political party my beliefs align to.
• I have participated in protests online.
• I have participated in protests offline.
• I enjoy having political discussions with friends and family online.
• I enjoy having political discussions with friends and family offline.
• Being actively involved in national, state and local issues is my responsibility.
• I have volunteered in my community outside of school assignments.
• I have done something to help raise money for a charitable cause outside of a school assignment.
• I stay informed on current events and politics.
• I look forward to turning 18 so that I can register to vote.
• I participate in online discussions that involve national, state and local issues that matter to me.
• I am an activist for political or social issues that matter to me online.
• I am an activist for political or social issues that matter to me offline.
• When I see a political or social justice campaign online I will share, like or retweet it to show support.
• I believe that speaking up for what I believe in online can make a difference.
• I believe that speaking up for what I believe in offline can make a difference.
Appendix F

Data Analysis Procedure

Qualitative Data Analysis

1. Researcher to analyze student reflections. Any reference related to participation, professional learning, and voice will be documented.

2. Researcher to analyze student work products. Any indication of growth in career knowledge, development of voice, or civic engagement will be documented.

3. Researcher to cross-examine research notes with all of the above documented items, or lack thereof.

Qualitative data will be used to support the quantitative results.

Quantitative Data Analysis

1. Researcher to input student level data on excel spreadsheet.

2. Researcher to export tweet level data on excel spreadsheet directly from Twitter platform.

3. Researcher to code student level and tweet level data, analyze for trends.

Findings to support the following research question:

1. At what levels do students engage with the Twitter community?

2. What are students’ attitudes towards civic engagement after using Twitter to explore using their voice online?
Triangulation of the qualitative and quantitative data will occur. Comparing the qualitative and quantitative data will provide answers to the following research questions:

1. How is student voice impacted while participating in an online learning network?

2. How do students use Twitter to become professionally and civically engaged?
BIBLIOGRAPHY


