

# **A Contextual Approach to Digital Citizenship, Digital Literacy, and Student Voice**

by

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## ABSTRACT

Reluctance to embrace the use of social media in the K-12 classroom means there is limited research on the extent to which a guided approach to using social media might support students in an educational context. This narrative inquiry study focuses on the Ontario Educational Student Chat (ONedSschat) to determine the extent to which students who were part of the organizing team developed proficiency with digital citizenship and digital literacies, as well as student voice and agency, in order to demonstrate digital leadership skills. Data examined includes student tweets, archived webinars, interviews with two adult mentors and one student, podcasts and webinars. With few exceptions, students on the ONedSschat team exhibited a high degree of digital citizenship, used tools and platforms with greater fluency, had full agency over the project, and demonstrated digital leadership as a result of teacher mentorship. The greatest gains in terms of digital citizenship, literacies, and student voice were made by younger students.

**Keywords:** social media, digital literacies; student voice digital citizenship; student digital leadership

## AUTHOR'S DECLARATION

I hereby declare that this project consists of original work of which I have authored. This is a true copy of the project including any required final revisions, as accepted by my examiners.

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Jennifer Casa-Todd

## **STATEMENT OF CONTRIBUTIONS**

I hereby certify that I am the sole author of this project and that no part of this thesis has been published or submitted for publication. I have used standard referencing practices to acknowledge ideas, research techniques, or other materials that belong to others. Furthermore, I hereby certify that I am the sole source of the creative works and/or inventive knowledge described in this thesis.

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## TABLE OF CONTENTS

ABSTRACT	2
AUTHOR’S DECLARATION	3
STATEMENT OF CONTRIBUTIONS	4
TABLE OF CONTENTS	6
Chapter 1. Introduction	9
1.1 Overview	9
Chapter 2: Literature Review	12
2.1 Digital Citizenship	13
2.1.1 Defining Digital Citizenship Education	13
2.1.2 Digital Citizenship as Civic engagement and Digital Identity	15
2.1.3 A Contextual Approach to Digital Citizenship Education	17
2.2 Digital Literacies	18
2.2.1 Defining digital literacies.	19
2.2.2 Twitter	20
2.2.3 YouTube Live	22
2.3 Student Voice and Agency	23
2.4 Situated Learning and Cognitive Apprenticeship Framework	24
2.5 Student Digital Leadership	26
Chapter 3. Methodology	29
3.1. Nature of the Study	29
3.1.1 Narrative inquiry	29
3.1.2 Assumptions and Biases	31
3.2 Sample	31
3.3 Privacy, Anonymity, and Ethics	33
3.4 Data Sources	33
3.5 Procedure	35
3.6 Data Analysis	37
Chapter 4. Results	39
4.1 Digital Citizenship	39
4.1.1 YouTube Live Webinars	39
4.1.2 Twitter	41
4.1.3 Teacher perspectives	53
4.1.4 Student Perspective	54

4.2 Digital Literacies	56
4.2.1 YouTube Live Webinars	56
4.2.2 Tweets	57
4.2.3 Teacher Perspectives	61
4.2.4 Student Perspectives	63
4.3 Student Voice and Agency	65
4.3.1 YouTube Live Webinars	65
4.3.2 Tweets	67
4.3.3 Teacher Perspectives	76
4.3.4 Student perspectives	78
4.4 Student Digital Leadership	78
4.4.1 YouTube Live Webinars	79
4.4.2 Tweets	81
4.3.3 Teacher Perspectives	87
4.3.4 Student Perspectives	89
Chapter 5. Discussion	92
5.1 Digital Citizenship	92
5.2 Digital Literacies	95
5.3 Student Voice	97
5.4 Digital Leadership	98
5.5 Situated Cognition/ Cognitive Apprenticeship	99
Chapter 6. Limitations of Study	101
Chapter 7. Educational Implications	102
7.1 Situated Cognition in a K-12 Educational Setting	103
7.2 Social Media and Fear Narrative	104
7.3 Increased Voice and Ownership	104
7.4 Twitter for Communication and Community Building	105
7.5 Participatory Affinity Space Elements	106
Chapter 8: Concluding Thoughts and Future Research	107
References	109



## Chapter 1. Introduction

### 1.1 Overview

The concept of the Ontario Education Student Chat (ONedSsChat), which is a student-led chat for K-12 students, live-streamed on YouTube with real-time participation, was initially created by the ONedSsChat cofounders to address a problem with social media and education. Although social media use among young students was on the rise, use of social media in the context of teaching and learning in K-12 occurred infrequently, which continues to be the case. A comparative study of student social media use among 13 to 17-year-olds from 2012 to 2018 saw a rise from 41% to 89% of students using a smartphone and an increase from 34% to 70% of students aged 13 to 17 who used social media multiple times a day (Rideout & Rob, 2018). In contrast, according to a nationally representative sample of 1208 U.S. K-12 teachers, social media was being used in only 13% of classrooms (Vega & Rob, 2019). As an educator with a literacy background, I understood the potential of using social media, especially Twitter, both as a literacy practice (Greenhow & Gleason, 2012) and as an opportunity to embed digital citizenship (Couros & Hildebrandt, 2015).

The idea of ONedSsChat was to create a chat that would connect students in Ontario to one another, around topics they cared about using social media, with the hope that we might show students how to use social media for learning and connecting with others. Myself and the other two teacher mentors who co-founded the chat thought of students in our own lives or schools who might be interested in becoming part of the student team.

It was about a year after the chat was born that I realized that the contextual approach we were using to guide students to use technology and social media, the ONedSschat, was worthy of

research and analysis. One of the most important reasons to engage in researching ONedSchat and its implications was primarily the paucity of research that speaks to the use and benefits of social media in the K-12 educational landscape (Kimmons, Carpenter, Veletsianos, & Krutka, 2018). Most research in this area has been conducted at the post-secondary level (Tang & Hew, 2015). Where social media was investigated with younger students, there were generally positive effects (Vohra, 2016; Becker and Bishop, 2016; Snyder, 2016), but these studies were focused on singular subject areas. A study focusing on a multi-aged, thematic approach to using social media to connect students to experts did not exist.

Gao and Li (2017) conducted an analysis of the impact of using a one-hour Twitter chat for teacher professional development and found that participants interacted with others on topics and issues to support their learning (2017). Twitter is the primary communication tool for participants and our student team in order to chat about monthly topics. After reviewing the literature, I realized there had not been an examination of a twitter-chat in which students have been the primary participants and organizers, and it would be inaccurate to make inferences about the impact on students based on teacher results only (Kimmons et al., 2018).

We also wanted to build a community for the chat using social media and were not entirely sure that Twitter alone would suffice. Although Vohra (2016) found that students in a grade 8 Mathematics class effectively used Twitter to build communities, other studies spoke to the limitations of Twitter. For example, a study by Gunuc, Misirli, and Obadasi (2013) of eighth-graders in Turkey, found Twitter to be unproductive and restrictive and therefore, an ineffective communication tool.

As a team, we decided to combat possible limitations of Twitter by live-streaming our monthly Twitter chats on YouTube. A live stream would allow the student team, experts and

guest panellists to view one another and allow viewers to participate in the conversation via the YouTube chat or by using a hashtag on Twitter. While video-streaming services such as YouTube, SchoolTube, and Netflix were the most prevalent digital tools used by K-12 teachers according to a 2019 Common Sense Media study (Vega & Robb, 2019), several searches yielded no research on the use of YouTube Live streaming as a tool for teaching and learning in a K-12 educational context.

It was approximately one year into the existence of the ONedSchat that I started to notice and document several important themes that were worthy of research. Firstly, it became evident that the student team and the participants of the chat were learning digital citizenship skills while actually being online (Couros & Hildebrandt, 2015). Secondly, we noticed students' proficiency using digital tools was increasing. Two students, for example, who had never used Twitter before, created videos which they named "Chat Hacks" to teach others how to use Twitter effectively. Thirdly, students grew in confidence and used their voices to express opinions during the chat, as well as to assert themselves more prominently in the organizational aspects of the chat. These initial observations led me to focus on the following research questions:

1. To what extent does a contextual approach (ONedSchat) influence student digital citizenship behaviours?
2. To what extent does a contextual approach (ONedSchat) build digital literacy skills in students?
3. To what extent does a contextual approach (ONedSchat) give students voice and agency?

4. To what extent has this contextual approach impacted student leadership in online environments (student digital leadership)?

In this paper, I will explore these questions through the narrative the data tells, as both participant and researcher of a lived story (Connelly & Clandinin, 1990). The chapters that follow explore these research questions via narrative inquiry. Chapter 2 will explore related literature, Chapter 3 will outline the results the data reveals based on Tweet and Talk webinars, tweets, and personal interviews. In Chapter 4, I will discuss the results and findings, while in Chapter 5 I will explore the Educational implications of my findings. I

## **Chapter 2: Literature Review**

The ONedSchat project and this paper were framed around four key areas: digital citizenship, digital literacies, student voice, and student leadership upon my research questions: Would the contextual approach of ONedSchat influence student digital citizenship behaviours? Would our approach build digital literacy skills in students? Would they see their voices as powerful? Upon further examination, I noted that students perceived themselves to be role models and leaders for other students. Specifically, I saw data that showed that as students gained proficiency in digital citizenship and literacies, they demonstrated characteristics of digital leadership (Ahlquist, 2016). The cognitive apprenticeship framework (Collins, Brown, & Holum, 1991) surfaced as important to understanding the data and the narrative that unfolded and could provide insights to educators as to how to scale the results and implications of this study into a K-12 traditional classroom.

This Literature Review is thus organized into the following sections: Digital Citizenship, Digital Literacies, Student Voice and Agency, Cognitive Apprenticeship, and Digital Leadership in order to provide a research basis for the results and discussions of the study.

## **2.1 Digital Citizenship**

This study explores the extent to which students gained proficiency in digital citizenship skills. It is thus important to define what is meant by digital citizenship, as well as understand how the concept has evolved over time and is interpreted by different stakeholders. A connection between civic engagement on and offline is significant to some of the behaviours demonstrated by the students on the ONedSchat team, as well as the observations of students' digital citizenship behaviours by one of the teacher mentors. Also, it is essential to explore the benefits or drawbacks of attaining digital citizenship skills using a contextual approach. My review of the literature around digital citizenship is organized as follows: defining digital citizenship, digital citizenship as civic engagement and identity, and digital citizenship in context.

### 2.1.1 Defining Digital Citizenship Education

Historically there has been a fear of allowing students to engage in online opportunities to connect with other students because of the worry of inappropriate behaviour or cyberbullying (Jenkins, Ito, & Boyd, 2016; Teague, 2015). One of the primary approaches that schools attempt to counter the fear of cyberbullying is through the concept of digital citizenship, which has been interpreted and defined in a number of ways.

The International Society for Technology in Education (ISTE), an organization which has created standards for technology education for teachers, administrators and students, defines digital citizenship as respecting privacy, intellectual property and other rights of people online

(ISTE 2018). ISTE also includes in its description of digital citizenship, communicating and acting with empathy via digital channels, applying critical thinking to online sources, leveraging technology to advocate for and advance social causes, being mindful of emotional and mental health while using digital tools, leveraging digital tools to collaborate with others, and understanding the permanence of the digital world and proactively manages digital identity (ISTE, 2018). In another document, ISTE references a “new” digital citizenship philosophy in which digital citizens are “learners who use their technology-driven powers conscientiously — and with empathy — to help make the world a better place” (ISTE, 2018, para. 1). They focus on three facets of digital identity: digital agent, digital interactor and digital self (ISTE, 2018). With so many differing explanations and definitions of digital citizenship, even within the same organization, it is no wonder that teachers are uncertain as to how to best support students in K-12 classrooms to develop the skills necessary to navigate the digital landscape.

Ribble (2015), who has written several foundational works on Digital Citizenship in Schools, and whose nine elements of digital citizenship formed the basis of the ISTE digital citizenship work, defines digital citizenship as the way “we should act, and interact with others when we are online understanding the norms of appropriate behaviour with regard to technology use” (Ribble, 2015, p. 15).

Unfortunately, digital citizenship in the context of teaching and learning in K-12 has focused primarily on what not to do. Ribble (2015) states that we need to help students focus on positive uses of technology, which can impact their decisions of what to post or comment while using digital technologies. Henry Jenkins states that when we focus on the negative effects of media consumption we do not “appropriately value the skills and knowledge young people are

gaining through their involvement with new media” (Jenkins, 2007, para. 17), which Jenkins believes misleads us about the role adults need to play in helping kids to learn and grow.

### 2.1.2 Digital Citizenship as Civic engagement and Digital Identity

The Internet can provide important opportunities for civic engagement by allowing youth to practice positive social skills and connect with their community (Jones & Mitchell, 2016). The idea of digital citizenship as an extension of traditional civic participation is prevalent in research (Choi, Glassman, & Cristol, 2017; Kahne, Lee, & Feezell, 2013; Jenkins 2017). Jones and Mitchell (2016), in their study of 978 youth, define digital citizenship as respectful and tolerant behaviours toward others; and increased civic engagement activities (Jones & Mitchell, 2016, p. 2065). Kahne, Lee, and Feezell (2013) surveyed 5,505 juniors and seniors in high school and determined that youth participation in non-political, interest-driven online activities fosters civic and political engagement, whereas friendship-driven use of social media did not.

Westheimer and Kahne’s (2004) framework of citizenship is a useful one to apply to a modern-day understanding of digital citizenship. The personally responsible citizen (Westheimer & Kahne, 2004) is characterized as one who acts responsibly in their community and contributes to that community. A participatory citizen is one who is involved in the community and has strategies to accomplish tasks within that community (Westheimer & Kahne, 2004). Westheimer and Kahne (2004) also define a justice-oriented citizen as one who looks to address injustice, “knows about social movements and how to effect systemic change” (p. 242). All of these characteristics may be applied to the behaviours that students in the ONedSschat team demonstrated online.

The tendency to use the term citizen represents a movement in digital citizenship education whereby citizenship and civic engagement should be synonymous and that the term

digital should be removed from the equation. The International Society for Technology in Education includes the idea of civic engagement in its definition of digital citizenship: “being active citizens who see possibilities instead of problems and opportunities instead of risks as they curate a positive and effective digital footprint.” (ISTE, 2019, para. 3). Ryland (2018) argues that being a digital citizen requires community, rights and responsibilities and political engagement. Jones and Mitchell (2016), suggested that having youth practice being supportive when others express their opinions online, engaging in perspective taking, and practicing using respectful language to voice opinions are more effective than lecturing to students about what kinds of behaviour they "should not" exhibit. Jones and Mitchell (2016) also observed that and online civic engagement and respectful behaviour were positively related to helpful online supportive actions .

The concept of digital identity emerges in the literature about digital citizenship. Slater (2002) suggests that having control of one’s identity online is important and that in essence, you become that which you type. Ahlquist (2016) speaks to digital identity as “the actual behaviour [sic] exhibited online by students as they tell the stories of who they are at that point in time” (p. 18). Junco (2014) in his book, *Engaging Students through Social Media: Evidence Based Practices for Use in Student Affairs*, speaks of self-presentation as the process by which people try to either consciously or unconsciously influence how others perceive their image through social interactions and asserts that youth experiment with the presentation of their online selves (Junco, 2014). Junco (2014) also differentiates the idea of promoting your professional self through an ideal image, which he refers to as promoting a brand, and the idea of exploring identity through social media.

### 2.1.3 A Contextual Approach to Digital Citizenship Education

This study focuses on the ONedSchat, which provides a contextual approach to digital citizenship. Some research suggests that modelling and teaching the appropriate use of technology should be initiated through learning in the classroom (Snyder, 2016). However, the foundational document for the province of Saskatchewan, *Digital Citizenship Education in Saskatchewan Schools*, states that Digital Citizenship education, wherever possible, should not exist as a stand-alone course or unit; but rather should be learned through practice and authentic online situations and experiences (Couros & Hildebrandt, 2015). In order for students to develop many of the skills they will need for the future, they must “actually spend time working in online networks” (Couros & Hildebrandt, 2015, p.12). The authors argue that connected learning spaces can help support digital citizenship skills, even if students are not explicitly learning in an online environment (Couros & Hildebrandt, 2015).

A digital citizenship curriculum has been created in many places to help students see that digital citizenship is not considered in isolation; rather it takes into account the interplay of technology and communication, culture, and societal practices (Mattson, 2016). In a qualitative study of seven teachers and one project administrator at the middle school level, Snyder (2016), noted that one way to teach digital citizenship in context is through global collaborative projects via social media. Snyder reported that “global collaborative projects served as a catalyst to students taking on the roles associated with digital citizenship” (p. 290), and that when students engaged in learning around a global collaborative project, they understood that their actions could benefit or harm others, and could be of benefit to their own online reputation as well (Snyder, 2016). When social media was used to collaborate globally, there were positive effects on digital citizenship and that integrating digital citizenship by means of global collaboration and

social media into middle school curriculum allowed students who held narrow perspectives to become less ethnocentric (Snyder, 2016). Students in the qualitative case study became sharers of knowledge who approached others online with empathy and used technology responsibly in educational settings (Snyder, 2016). Gleason and Gillern (2018) added that a conceptual analysis and empirical research to demonstrate that digital citizenship practices should be learned through a social media-facilitated curriculum.

Some researchers suggest that if students do not learn digital citizenship in context, they will be unlikely to apply these skills in their lives. Mattson (2016), in her critical discourse analysis exploring the concept of digital citizenship, observed that studies on digital citizenship and learning did not measure the extent to which students applied knowledge outside of the classroom or how effectively students retained learning of digital citizenship skills over time. Gleason and Gillern (2018) assert a need for digital citizenship curricula, which emphasizes real-life experiences, interests, and values of youth. Gleason and Heath (2019) argue that social media is not a tool, but rather a participatory practice that requires authentic engagement allows participants to develop identities, make meaning, and create and share knowledge.

For the purposes of this study, digital citizenship is defined as acting responsibly, respectfully, and ethically while creating and sharing in online spaces.

## **2.2 Digital Literacies**

This study explores the extent to which students gained proficiency in digital literacies. It is thus important to define what is meant by digital literacies, as well as understand how the concept has evolved over time and has been interpreted by different stakeholders. My review of literature around digital literacies first defines digital literacies and then explores research literature around Twitter and YouTube Live as the primary platforms of ONedSchat.

### 2.2.1 Defining digital literacies.

Jones and Mitchell (2016) define digital literacy as computer and internet-based skills including search strategies and privacy settings, and correctly citing information. Digital literacy has also been defined as the basic skills required for working with digital media, information retrieval, a wide range of professional computing skills and participation in the creation and sharing of knowledge via social networks (UNESCO, 2011). Where digital citizenship is about using tools, including social media ethically and responsibly, digital literacy involves flexibility in thinking and a proficiency with digital tools to match the purpose and the audience (Lankshear & Knobel, 2015). Because of the multi-levels of skills and practices involved, Knobel and Lankshear (2006) argue that we should not look at digital literacy as unitary or finite; instead we should consider digital literacies as the ability to engage in meaning making mediated by a myriad of modalities, texts, and social practices which are produced, exchanged digitally (Knobel & Lankshear, 2006).

Some evidence suggests that using social media promotes digital literacies. Deaves, Grant, Trainor, and Jarvis (2019), in a mixed methods study of 33 students in their final year of undergraduate physiotherapy students, found that active engagement with social media provided opportunities for students to develop professional networking and communication skills as well as enhance employability skills which are essential for developing digital literacy capabilities. Lankshear and Knobel's concept (2017) of "new literacies" seem to encapsulate the ONedSsChat experience because it takes the form of "learning to be" rather than "learning about" (p. 8). "New literacies", often interchanged with digital literacies, allow participants to negotiate texts and make meaning using a variety of tools, particularly involved with their own interests and purposes (Lankshear & Knobel, 2017). Some researchers also assert that new and

digital literacies present a social approach to learning, driven by shared passions, collaboration, and an affinity community (Lankshear & Knobel, 2017). Gee (2013) refines the idea of an affinity space as one in which content knowledge is not considered as important as helping students to work together to engage in social learning mediated by affinity spaces which he describes as safe spaces, organized by multi-aged groups, whereby participants develop and maintain norms of behaviour, support each other despite diverse skills and ages. The connection between greater proficiency in digital literacies and the establishment of an affinity space will be further explored in the results section of this paper.

### 2.2.2 Twitter

Greenhow and Gleason (2012) assert that “tweeting” is a literacy practice that combines both traditional and new literacies. They articulate that Twitter requires conventions for self-presentation, including constructing an effective Bio (biography or profile), understanding who to follow, how to participate in the form of replies, recognizing others using "mentions", how to distribute information by "retweeting", and how to organize conversations using "hashtags" (Greenhow & Gleason, 2012). Because these elements differ in their constructions on and offline and among different platforms, it can be argued that they are indicative of new literacy practices. In particular, Gleason (2016) argues that Twitter represents a new literacies practice because meaning making is both multimodal and requires active participation. Belshaw (2015) also speaks to digital literacies and the example of Twitter. Belshaw (2015) maintains that to make meaning using Twitter, there needs to be understanding at the procedural level (i.e., the character limits of message in Twitter), and a conceptual understanding, such as knowing that Twitter represents a channel of communication, which can be appropriated by groups through hashtags .

Deaves et al. (2019) found that Twitter was a positive addition to learning for undergraduate physiotherapy students in terms of digital literacy, educational experience, professional identity, and self-confidence. Vohra (2016) in a case study of six students and one teacher in a grade 8 Mathematics class, observed that the use of Twitter was seen as an opportunity to provide a deeper understanding of how social media tools such as Twitter work, as well as encouraging students to create communities of learners to support each other during the learning process. The teacher in this study reported that Twitter gave every student in her Math class a voice and allowed for increased collaboration (Vohra, 2016). Junco, Heiberger and Loken (2011), in their study of 125 first year pre-health professional majors, reported that students used Twitter to ask questions of their peers related to academic milestones, offered encouragement, and independently organized a study group. Furthermore, they asserted that using Twitter in the context of learning, positively impacted student engagement. Finally, students in the experimental group who used Twitter, were more engaged and earned higher semester grade averages than students in the control group who did not use Twitter (Junco et al., 2011). Similarly, Gunuc et al. (2013), in a study that examined 8th graders in a private school in Turkey using survey data, concluded that using Twitter increased social interaction and collaboration, supported mentoring, and promoted self-expression skills.

While the use of Twitter can have a positive impact on engagement, self-expression, and digital literacies, potential barriers and challenges have also been reported. For example, a mixed-methods study of undergraduate physiotherapy students who were not familiar with the Twitter platform, did not feel confident in such a public platform for sharing (Deaves et al., 2019). One student in that study stated that a drawback to using Twitter in the context of learning was the assumption that he knew how it worked and its affordances (Deaves et al., 2019). In

another study, this time of eighth graders in Turkey, students did not consider Twitter as a communication tool and quit using it after the one-week study. They apparently found the platform unproductive and restrictive (Gunuc et al., 2013). At the time of the study, Twitter only allowed 140 characters. Research around the use of Twitter in an educational context suggests that although students enjoyed sharing ideas, reading the tweets of their classmates and voicing their opinions, questions tweeted by students were rarely answered, which resulted in minimal interactivity (Vohra, 2016).

A comprehensive and critical review of Twitter by Tang and Hew (2017) focused on peer-reviewed journals in order to provide a "panoramic picture" of how Twitter has been used in teaching and learning. Of the 52 reviews, only two were conducted in primary education, and three in secondary education. The rest focussed on higher education. There is a definite gap in research literature with respect to investigating the use of Twitter with elementary and secondary school students (Vohra, 2016).

### 2.2.3 YouTube Live

YouTube Live was the other primary platform used in ONedSchat whereby the panel discussion around topics was presented in real time using. Research on the impact of using YouTube Live and/or Google Hangouts on in K-12 classrooms is limited. YouTube Live stream offers like-minded audiences the opportunity to participate, share opinions and build community (Hu et al., 2017). Some research has been conducted on the use of YouTube Live in higher education. For example, Aniroh, Hanum, and Ghoffar Ariyanto (2018) reported that graduate students responded positively and enthusiastically to live streaming. Other gains observed included motivating shy students to ask questions, increased real-time communication with the teacher, and controlling the pace of learning (Aniroh et al., 2018). On the other hand, teacher

digital literacies, that is, being able to implement and use YouTube Live streaming effectively, flexibly, and proficiently, was identified as an obstacle to its use (Aniroh et al., 2018). Herrom (2017) noted that YouTube Live stream can create community especially if comments are read during the event using participants' names to enhance the connection between viewers and participants and minimize the digital separation that naturally exists.

### **2.3 Student Voice and Agency**

This study explored the extent to which students felt that ONedSchat gave them voice and agency. It is thus important to define what is meant by student voice. Several studies in higher education have been conducted on student centred learning and the role of student voice. Blau and Shamir-Inbal (2017) examines the role of digital technologies on student voice in an online Master's education course. They defined student voice as not just listening to students, but valuing their views and treating them as equal partners. They reported positive effects when students functioned as co-designers and co-creators of the course content and their own learning experience.

Lindgren and McDaniel defined student agency as providing choice in their learning (2012). They surveyed 96 graduate students in an online course and reported that increased student agency increased perceived relevance of course material, critical thinking and design skills (Lindgren & McDaniel, 2012).

Ahlquist (2015), who studied college level student leaders and their online interactions, noted that students, even if struggling with self-confidence, used social media as a vehicle to express their voice and opinions. Ahlquist recommended that adults working with students via social media ensure that students be included when creating policies and engaging in dialogue about social media use. They also observed that student leaders received interaction and

guidance from family, peers and their schools, which positively or negatively impacted their college social media behaviour.

Mitra (2018) identifies a hierarchy of student voice in the shape of a triangle with listening at the bottom, collaboration in the middle, and leadership on the top. Mitra defines collaboration as adults and youth working together, whereby adults initiate the relationship but ultimately have the final say in what happens. Collaboration is noted as better than listening whereby students share and adults interpret the information. Mitra (2018) places leadership at the top of the student voice pyramid. In leadership, students make decisions while the adults assist. She clarifies that most examples exist outside of school, but that there is greater benefit to youth and adults alike, if this model was assumed in school transformation. The more students “can assume agency in the initiatives, the more opportunities they have to learn and to grow” (Mitra, 2018, p. 474). For the purpose of this paper, student voice and agency refer to students taking an active role in their own learning by being co-designers in their learning and using their opinions to inspire others or impact change.

## **2.4 Situated Learning and Cognitive Apprenticeship Framework**

Situated learning, and more specifically cognitive apprenticeship, provides an effective framework for the scaffolded learning within online social media learning communities. When applied to digital citizenship, digital literacies, and student voice, situated cognition and cognitive apprenticeship provide a springboard for scaffolding and guiding students that could be applied to how the adult mentors supported students on the ONedSschat team.

In situated cognition, learning happens by doing rather than by passively receiving information (Lave, 1988; Collins, Brown, & Holum, 1991). To build a rich understanding, people also need to use tools in authentic ways (Brown, Collins, & Duguid, 1989). In situated cognition,

learning is continuous, and involves an understanding of the world. The tools being used continually change because of the interaction and interplay of the two (Brown et al., 1989). Thinking must be tied to experiences and embodied in action (Gee, 2010).

In 1989, the “tools” to which Brown, Collins, and Duguid refer are not technology-based, but situated cognition and cognitive apprenticeship can be extended to learning with new media and the internet (Brown, 2006). Gee (2010) makes the connection between what he called, “situated-sociocultural” (a combination of situated cognition and sociocultural approaches) literacy and technology in the context of new literacies, specifically linking learning processes and reading to playing video games. Gleason and Heath (2019) argue that social media in teaching and learning must take the form of situated cognition, stating that only through authentic participation can educators truly see the full range of promise, peril, and potential. Gomez and Lee (2015) use a situated cognition approach in media production, leveraging social media to build skills through a voluntary interest-driven after school program serving sixth to eighth grade students.

Cognitive apprenticeship requires that learning activities are carefully modelled and that students are guided throughout the process (Tilley & Callison, 2007; Abe & Jordan, 2013). The core concepts in cognitive apprenticeship, namely modeling and explaining, coaching, scaffolding, fading, articulation, reflection and exploration, provide an ideal framework for learners to accomplish tasks and goals (Collins, 2015). The cognitive apprenticeship framework is designed to help students acquire an integrated set of cognitive and metacognitive skills through observation, guided practice and supports (Collins et. al., 1989). Part of the modeling phase includes an expert thinking out loud which models the mental processes (de Leon, 2013, p.763). “Experts” do not have to be teachers, however, as the role of expert can move from

teacher to teacher to student fluidly (Tilley & Callison, 2007). In the fading phase, a gradual removal of supports/scaffolding occurs until students are carrying out complex processes/talks and articulating learning on their own (Collins et al., 1989).

Modeling, coaching, scaffolding, and fading were noted in this study as a framework for which students developed digital citizenship and digital literacies, confidence to express their voices, as well as digital leadership skills.

## **2.5 Student Digital Leadership**

Limited research has been conducted in the domain of student digital leadership. Only one study was found examining student leadership in terms of identity and decision making within a social media context (Ahlquist, 2015). Based on 40 college student leaders, group interviews and 2220 social media posts were analyzed to determine the role social media has on identity and experience of college students, and the patterns of behaviour that exist in their interactions (Ahlquist, 2015). Ahlquist (2015) noted the many gaps in the literature regarding student digital leadership, especially “digital identity development, digital literacy development, digital leadership theory, or even simply what social media student leaders use and how they use it” (p. 22). Lewis and Rush (2013) do not use the term digital leader, but rather a *digital steward*, as one who is aware of and able to use technology, is open to experimenting with it, and explores how to incorporate it into the larger community. The positive results of community building which were achieved by using Twitter in Lewis and Rush’s (2013) study pertain to academic staff at the university level. Sheninger (2014) defines digital leadership as one’s ability to “focus on a consistent pursuit of innovation, effective integration of technology, quality of professional development, transparency, celebration of success from which others may learn, establishment of relationships with stakeholders, an open mind, and anticipation of continued change” (p. 23).

Sheninger's (2014) definition, although referenced in Ahlquist's academic study (2015), has no foundation in research literature and applies to educators rather than students. Ahlquist (2015) uses social change model and includes the quality of change agent to her definition of student digital leadership.

The only other reference to digital leadership in the research literature is made by Narbona (2016) who analysed the tweets by Pope Francis (@Pontifex) in order to make a case for the Pope's role as a digital leader. Norabna (2016) defined digital leadership as "the human quality of leadership exercised with digital tools in the virtual world" (Norbona, 2016, p. 85). This definition serves as a good foundation for the current study because Norona (2016) focuses on Twitter as a leadership tool. He also notes that digital leaders not only reproduce what we expect of offline leaders, but also demonstrate qualities such as appropriateness, timeliness, technical specialization, and a relationship that supports their role as leader (Norbona, 2016). He further refines the idea of relationship as a connection the leader has with followers and states that, "[l]eadership is confirmed when this interaction sparks the interest of the other online users who then demonstrate support to the leader by sharing the content, showing their appropriateness" (Norbona, 2016, p. 94).

Without a solid research foundation built around the concept of digital leadership, it is worthwhile to look at the role of student leadership to help refine a working definition for the purposes of my study. Hargreaves (2012), in his comprehensive report on the changes required in education, references student leadership, establishes a clear relationship between student leadership and educational change. He states that students should be partners in leadership and education reform. When students feel ownership and initiate changes, they have a vested interest

in ensuring an initiative succeeds (Hargreaves, 2012). However, he does not define student leadership.

Seemiller (2013) created a framework for what he calls student leadership competencies, derived by analyzing and coding 475 academic programs and their respective learning outcomes. These competencies, which were originally applied to students at the college level and for career preparation, include learning and reasoning; self-awareness and development; group dynamics; personal behavior, civic responsibility; strategic planning; communication; and interpersonal interaction. Although these competencies refer to in-person skills and behaviours, it is worthwhile to extend a few Seemiller's (2013) student leadership competencies to behaviours exhibited online. Communication, learning and reasoning, and group dynamics competencies for example, can be extended to online environments quite easily. However, self awareness, which involves understanding one's personal values and personal contributions, might not translate to awareness of digital identity.. Thus, there are limitations to using Seemiller's (2013) competencies to define student digital leadership.

For the purpose of this paper, student digital leadership is defined as the ability to use technology, especially social media to model digital citizenship, show flexibility using platforms and tools, develop a digital identity, and use their voices to network, create community, and inspire change.

## Chapter 3. Methodology

### 3.1. Nature of the Study

#### 3.1.1 Narrative inquiry

Narrative inquiry served me well as a methodological approach in this study, as I am a novice researcher who wanted to understand that which I was seeing, hearing and experiencing rather than attempting to “formulate a logical or scientific explanation” (Kramp, 2003, p. 105). I read that I must begin with listening and re-listening to the stories of participants in order to interpret, construct, analyse and present my findings (Kramp, 2003). To me, these stories are multi-modal and have their own “rhythms and sequences” (Clandinin & Connelly, 2000, p. 97). The sounds of the participants’ stories both for adult mentors and student leaders are present (Greene, 1991). These sounds can be “listened” to in the form of the tweets our student leaders share, in the contributions during our monthly meetings, through their sharing on panels during the Tweet and Talks, and in their reflections in podcasts and webinars. In examining the patterns and trends displayed in these communication forms, I am consciously being reflexive: “moving inward and outward, backward and forward” Clandinin & Connelly 2000, p. 50). As teacher-mentor, I am as intricately part of this story. My personal involvement helps me to “connect events, actions, and experiences and move them through time” (Kramp, 2003, p. 110). I have begun to understand that educational research can be seen as the “construction and reconstruction of personal and social stories” (Connelly & Clandinin, 1990, p. 2).

I also try to go beyond factually and surface appearance towards “thick description”, which Geertz (1973) describes as an ongoing process open to further interpretation because it considers context and inferences of everyday social interactions. Thick description is a way of recognizing that each research setting is rich with detail and that paying attention to details will

help create a more fulsome story (Mills, Durepos & Wiebe, 2010). Thick description also establishes an experience or sequence of events as a layered, sometimes emotion-filled, in which the voices, actions, and meanings of the interactions can be heard (Ponterotto, 2006).

I attempted to capture the web of social interaction as well as the thoughts and emotions of participants (Ponterotto, 2006) and to interpret the behaviours I saw in the context of the ONedSsChat project. Field records, common tools in narrative inquiry are observations in a “shared practical setting” (Connelly & Clandinin, 1990, p. 4), and I informally took notes and documented minutes of the monthly. These notes and personal interviews (Connelly & Clandinin, 1990) form the basis of my narrative, along with other sources including tweets, videos, and audio interview. I tried to stay away from what Connelly & Clandinin (1990) call the “Hollywood Plot” (p. 10) whereby everything works out well with a happy ending. I need to move out of the lived story (Connelly & Clandinin, 1990) to seek a critical perspective. Triangulating data helped me be more objective, especially where there was inconsistency, (e.g., when the tweets offer one interpretation and the interview and/or reflections via podcasts or webinars offer a completely different interpretation).

I examined the tweets of the student leads in the project, re-watched the YouTube Live stream webinars, and interviewed two adult co-founders of the project as well as one student to tell the entire story. While only one of the students was interviewed formally, direct quotations and paraphrased quotes by four other students were captured in podcasts and through webinars. Throughout, I was mindful about staying true to the results to the best of my ability, but I am inextricably a part of the story because the journey of these students and co-founders is also my story.

### 3.1.2 Assumptions and Biases

As in any qualitative study, there is an assumption that participants answered honestly to the best of their recollection. I also admit to having a cognitive bias because I nurtured this project from seed to sapling. It is possible that in interpreting the various data sources, even while trying to be objective, I was seeing what I wanted to see? I also recognize that I am central to the research story and the truth of what I am seeing, from multiple perspectives, is indeed true. My position in the ONedSsChat story is simultaneously narrator and central character. As such I can see the action from a distance, but also understand the context, action, and motivation of the “characters” within the story. Ratner (2002) reminds us that, “one of the advantages of recognizing subjectivity is to reflect on whether it facilitates or impedes objective comprehension” (para. 7) which I did as I analysed the multiple sources of information I collected. It could also be argued that “objective knowledge requires active, sophisticated subjective processes - such as perception, analytical reasoning, synthetic reasoning, logical deduction...[which] can enhance objective comprehension of the world (Ratner, 2002, para. 8). Yin (2017) noted that using multiple sources of evidence creates a more complete picture and allows you to corroborate findings. Rather than using a single source of evidence, triangulating data by incorporating interview data, webinar documentation, tweets, and podcast interviews documentation, allows for construct validity (Yin, 2017) and, therefore, helped me move past my personal bias.

### 3.2 Sample

The sample consisted of 11 students: five males and six females who participated as student leaders in the Ontario Educational Twitter Chat between October 2017 and May 2019.

They were contacted by the supervisor of this project and invited to participate on a voluntary basis. Of those students, only one male and one female were a part of the team for the entire time. The rest of the students participated from two months to one and a half years. I have listed the pseudonym, the grade, and the amount of time that students were involved in the chat in Table 1 .

**Table 1. Summary of Data Sources**

Student (pseudonym)	Grade*	Total time in ONedSschat 1 year = 8 months	Data sources			
			Tweets	YouTube Live	Interview	Webinar, Podcast
Emma	7	2 months	✓	✓		
Nick	12	3 months	✓	✓	✓	
Emily	12	3 months	✓	✓		✓
Lisa	12	4 months	✓	✓		✓
Gabriel	8	7 months	✓	✓		
Diana	8,9	1 year	✓	✓		✓
Adam	9	1 year	✓	✓		✓
Eric	10, 11	1 year	✓	✓	✓	
Charlotte	11, 12	1.5 years	✓	✓	✓	
Seth	7,8	2 years	✓	✓		✓
Rosie	8, 9	2 years	✓	✓		✓

\*time from first tweet to June, 2019

### 3.3 Privacy, Anonymity, and Ethics

All names were removed from the data collected about the student leaders, adult mentors and students in order to preserve anonymity, I completed an Ethics Review application through my own post-secondary institution and the Boards of Education where the students attended school. This was done so that interviews could be compared to tweets, podcasts, and webinars. Not all school boards have the same procedures when it comes to applying to do research involving teachers and students, and thus, three of the students who were integral to the study could not be interviewed, because of timeline restrictions for the application process.

Not being able to interview students led me to inquire about the “publicly available” data. If a minor tweets publicly, is interviewed on a podcast, or reflects openly in a webinar, could those quotations and testimonials be used as part of the story? I had to amend my ethics application to include any information shared to the hashtag and then research how I might cite the information I found, while protecting student privacy. Williams, Burnap & Sloan (2017) determined that opt-in consent should be sought for tweets for which direct quotes or screen captures that will be published. This is especially true for vulnerable participants such as children. They also suggested that where necessary, researchers recreate the tweet so that there are no identifying factors (Williams et al., 2017). Thus, I procured opt-in permission, and wherever necessary, rather than using direct quotes from tweets, podcasts or video available online, paraphrased information so that the identity of the students would not be uncovered.

### 3.4 Data Sources

The data for this study consisted of student tweets and replies, panel discussions (aka tweet and talk) which were streamed via YouTube Live and open-ended interviews. For the tweets, I took screenshots and used codes (see Table 2) in order to record the types of tweets

students were posting. The hashtag for the chat also led to podcasts, webinars, and student-presentations where the participants shared their reflections as members of the ONedSschat team. I listened and re-listened to these data sources and took notes focusing on individual student results. Open-ended interviews with one student as well as two teacher mentors were also conducted to compare and contrast results.

Table 2. Use of Twitter Codes

1	Promote ONedSsChat
2	Retweet re: ONedSsChat
3	Reply re: a prompt or participant in ONedSsChat
4	Tweet or Retweet related to school activities
5	Non-school related tweet or retweet
	5a. Related to an interest in profile 5b. Inappropriate (e.g., profanity, mature content) 5c. Inspirational (e.g., promoting kindness or a cause) 5d. Fun or silly 5e. Connected to sports or entertainment news
6	Non-school related reply

As I analysed social media artifacts including tweets, student-created videos, and YouTube panel discussions, I created a chain of evidence (Snyder 2016) by taking notes and categorizing what I was observing for individual students and applying the following thematic headlines: digital citizenship, digital literacies, student voice, and student digital leadership. I also considered all of the data as a whole when looking at the extent to the ONedSschat journey fit into the Cognitive Apprenticeship framework.

The amount of time students participated in the chat factored into the findings as do their varying ages. Data sources were varied and provided a more fulsome picture of the narrative.

Many of these sources are not traditional although, as already stated, this had implications for privacy and anonymity.

### **3.5 Procedure**

The ONedSschat consisted of three components: monthly evening meetings, a monthly daytime 30-minute chat, and a follow up slow chat. I have described each of these in detail in order to establish the context of my study.

Once or twice a month, the entire student and teacher team met to discuss topics and questions to be addressed in the next ONedSschat . Prior to meeting, team members shared possible chat questions on Twitter via a Twitter poll and using a Dotstorming board (a platform that allows participants to make topic suggestions and vote). The students, with teacher mentorship, selected a topic, and began to list questions for the topic. Students and teacher mentors used Google docs to create and record questions. Typically, a teacher lead asked students if a few of the questions could be amalgamated (duplication, wording). Students were then asked to highlight their favourite five questions and these became the questions for the chat. The process of creating topics and question was the same for all ONedSschats conducted over the two-year study period. As part of the monthly chat duties, students were encouraged to respond to individuals as well as promote the chat and questions via Twitter, the main platform for communication. Students were also encouraged to think about their answers to the questions for the live panel discussion.

Once a month, at 9:30 am ET in year one and 10:00 am ET in year two, one of the teacher leads would share the link for a Google Hangouts on Air (a video stream platform which allows for recording) via the YouTube platform. Participating students, who were generally in class, would go somewhere in their school (in the case of my students it was the library) to

connect in the Google Hangout approximately ten to fifteen minutes before the chat start time. During the YouTube Live discussion, participants did not interact via Twitter or the YouTube Live chat at all. Rather, they engaged in conversations around the topics and questions they had created within the YouTube platform. Teacher mentors on the team (and in year two, a few students) would bring questions or comments from the YouTube chat or Twitter into the panel discussion by stating the name of the student or class and then bringing in their comment or question. In year two, an expert on the topic of the month was invited to join and add to the YouTube Live discussion. The expert was sourced by any member of the ONedSchat team who had a connection to someone who might be knowledgeable on the topic. The format for the discussion was generally the same month to month: introductions, norms of expected behaviour, question 1 and student responses, question 2 and the student responses. Typically, one teacher mentor moderated the discussion and any other teacher mentors monitored the YouTube and Twitter chats.

After the live-stream, the panel discussion was archived and made available on the ONedSchat YouTube channel. All team members were encouraged to respond to participating classes and students to build upon ideas and keep the discussion going. In addition, two questions were reserved for the “slow chat”- a continued conversation on Twitter that involved a team member staggering the posting of additional questions about the topic addressed for the rest of the month. By mid-month, a new Twitter poll for suggestions would be posted for a new ONedSchat and we would start the process again.

Because of the cyclical nature of the chat, observing and taking notes on the growth of each ONedSchat student member, noting their individual contributions was easy to do. I analysed their tweets (see Table 1 and Table 2) in order to see if their digital citizenship and

digital literacy skills showed improvement, and I compared their voices on Twitter with the voice and agency I watched in the webinars. In addition, I gleaned much by taking notes on student reflections when the students presented at conferences or were guests on podcasts in which they shared perspectives about ONedSschat. Finally, I interviewed two teacher mentors and one student lead. All of these data sources were looked at individually at first, and then together as the full narrative story that evolved over two years.

### **3.6 Data Analysis**

The nature of narrative inquiry is such that the data tells a story. Researchers must “develop their own analytic rationale” (Snyder, 2016, p. 179) and rely on their own style of rigorous empirical thinking, along with sufficient presentation of evidence and careful consideration of alternative interpretations (Yin, 2017).

In order to recognize patterns and themes that emerged from the collection of social media archives, I created codes that I applied consistently to student tweets (Table 2)

I also analyzed the make-up and content of the student-composed tweets. I made notes regarding about what I would label as a hierarchy of tweets. For example, if I was looking at an individual student account who only retweeted, but did not compose original tweets, I did not assess this activity as indicating real proficiency with the Twitter platform. If student tweets were only concerned with the chat, even if they were composing their own tweets to promote the chat, then this too did not indicate proficiency compared to a student who also tweeted about their own interests. For the webinars, I viewed the first panel discussion by each student leader, one at the midway point of their participation, as well as the last chat in which they participated. Rather than coding these responses, I focused on a “thick description” which is characteristic of

narrative inquiry methodology, and noted patterns for each individual student based on the following themes: digital citizenship, digital literacies, student voice, and digital leadership. I tried to keep these notes and patterns independent of the results I observed on Twitter, in student and teacher reflections, and in open-ended interviews and podcasts.

My observations, notes, and analysis of the various data seek to answer these research questions:

1. To what extent does a contextual approach influence student digital citizenship behaviours?
2. To what extent does a contextual approach (ONedSchat) build digital literacy skills in students?
3. To what extent does a contextual approach (ONedSchat) give students voice and agency?
4. To what extent has this contextual approach impacted student leadership in online environments (student digital leadership)?

## Chapter 4. Results

### 4.1 Digital Citizenship

In order to answer the first research question, *How might a contextual approach (ONedSschat) promote digital citizenship?*, I examined YouTube Live webinars, student tweets, interviewed two teacher mentors and one student team member of the ONedSschat to determine the extent to which students used social media ethically and responsibly. In all of the data observed and collected, I identified two themes: a) students acted respectfully, and ethically while creating and sharing content online; and b) students had an awareness of tweeting for a public audience.

#### 4.1.1 YouTube Live Webinars

In every YouTube Live webinar (Tweet and Talk), students practiced digital citizenship by demonstrating an awareness of their audience and interacting ethically and responsibly. Practicing digital citizenship was due, in part, to the norms of behaviour that were explicitly created and shared by the ONedSschat team. Every Tweet and Talk panel discussion live streamed via YouTube Live included explicit mention of the ONedSschat “Norms of Behaviour” at the onset. These norms were co-constructed by the original student and teacher team. From the first webinar and for every subsequent Tweet and Talk one of the first statements made during the live stream by students on the team were the norms of behaviour:

- *Please be mindful that this chat is open to students in K-12.*
- *We encourage active participation from classes who are watching.*
- *All comments made during the chat should be positive and productive.*
- *Everyone is entitled to their own opinion. You may not agree with something someone has said, but we ask that when challenging an idea that you respectfully disagree with the idea, not the individual person.*

The norms explicitly refer to the responsibility of each participant (both on the panel and watching) to be respectful even if they don't agree with a statement being made. There were zero instances of students straying from these norms in any of the webinars.

Students built upon each other's ideas where there was agreement and where they disagreed, they did so respectfully. There were actually few instances where there were variances of opinion, likely because of the nature of the topics. For example, in the December ONedSchat webinar, the topic of *Paying It Forward* involved students sharing stories of school initiatives (donating food for local food banks, Movember, building schools, cancer research) that helped to make a positive impact in the world, students contributed their own stories and with complete agreement from the guest, expert, and student panelists. The focus of this ONedSchat, then, was not controversial.

When there was a difference of opinion, it was expressed very politely. This is one example from one of the earlier chats on the topic of Citizenship:

Nick: "I think citizenship is belonging to a country or province."

Adam: "Agreeing with Nick, I think citizenship is the way you *represent* that country or province."

Seth: "It can be a province or country, but it can also be in your school or in your town. It doesn't have to be in your country or province."

In this example, Adam wanted to add to Nick's statement his idea that participation is not enough but it's the way you represent yourself that counts, whereas Seth believed citizenship was more local and showed his disagreement by first acknowledging the opinion, but then adding "but it can also be" in order to share his own opinion.

In the Tweet and Talk on the topic of Body Image, Diana stayed relatively silent for much of the chat and when she did add her comments, they were contrary to some of the ideas expressed during the ONedSchat by guest panelists and a media expert on panel about the

negative impact of social media on body image. The conversation focusing on the negative impact of social media goes on for about six minutes before she adds:

I definitely agree with what everyone is sharing...but I just wanted to point out that although there are lots of negative ways social media impacts us, but there are lots of positives and will have a positive impact on your life and for some people it's about deciding how to spend your time in positive pockets on social media.

She goes on to list examples. Diana exemplifies the qualities of digital citizenship by acknowledging the opposite opinion as valid and adding her opposite view in a respectful manner. The norms of behaviour and expectations set forth by ONedSschat participants appeared to impact the way students interact with one another when they participate in the YouTube Live Tweet and Talks.

Students also exemplified digital citizenship by being aware of a public audience, primarily because the platform itself allows for live-streaming and recording of an archived video which can be viewed at any time by anyone. Students are aware they are speaking to each other, but also that the chat was being recorded. In each segment a student team member or teacher mentor would read a variation of the following statement, “Follow the hashtag to add your thinking and get involved in the conversation” and “the audience today is K-12, so please make sure you use language appropriate for all ages.” In both instances, there is an explicit statement about audience, which would have an impact on the student team’s understanding that whatever they share on the Tweet and Talk is public. Each Tweet and Talk regularly brought in comments and questions from classes directly from Twitter or the YouTube Live chat, which also reinforced the public nature of the conversation.

#### 4.1.2 Twitter

In addition to the YouTube Live Tweet and Talk chats, nine out of ten student team members of ONedSschat demonstrated effective digital citizenship by acting responsibly,

respectfully, and ethically, and being aware of a public audience while creating and sharing content on Twitter. Eleven students were on the ONedSschat team (past and present), however, one student who only participated in the chat for four months and only tweeted twice was not included in the results.

The norms of ONedSschat behaviour were shared on Twitter via the ONedSschat account. Figures 1 and 2 are examples from two different chats.



Figure 1. Norms of behaviour



*Figure 2: Responsible use*

Students demonstrated ethical and appropriate behaviour if the content of the student's tweets were only related to ONedSsChat, because they may have been mindful of teacher-mentors and ONedSschat participants viewing their tweets. When students tweeted about their own interests or other information, nine out of ten of the students' tweets could still be characterized as sharing content ethically and responsibly.

The Twitter behaviours of three students specifically were explored in depth because they had Twitter accounts prior to joining ONedSsChat. In the case of all three students (two grade 11 students and one grade 10 student), their Twitter accounts were used primarily to share their interests and passions. The ONedSschat played a very small role in their overall tweeting behaviour, with the concentration of tweets about ONedSschat happening while they were active members of the team. Out of Lisa's 524 Tweets, only 21 (4%) of them pertained to ONedSschat, and out of Adam's 6,356 tweets only 124 (0.02 %) did. Both Lisa's and Adam's Twitter accounts were primarily used to showcase their accomplishments and interests with a strong emphasis on leading and inspiring (which will be shared in the student voice and digital

leadership sections). Neither account used language that would be considered inappropriate even well before they were a part of ONedSschat.

In contrast, Nick's account did not exemplify digital citizenship prior to being in ONedSschat. Even after he joined the chat, there were some tweets that a teacher-mentor addressed as not adhering to our norms of behaviour. Nick joined Twitter in February 2015 but did not join ONedSschat until September 2017. Nick's tweets, also connected to his interests, were much more personal in nature than to Lisa's and Adam's tweets. Of Nick's 3260 tweets, only 12 (0.3%) tweets concerned ONedSsChat compared to Lisa and Adam. Nick's tweets prior to October 2017 could be characterized as somewhat inappropriate as he shared jokes and political comments. He used profanity in two tweets in October 2017, while he was a member of ONedSschat.

Four of the eleven students, two in grade 7, one in grade 8, and one in grade 9, used Twitter to promote ONedSschat and to share interests and accomplishments. Of the four students, one student had a Twitter account prior to joining ONedSschat. Her tweets were directly related to classroom activities, used a class hashtag, and tagged the teacher. The number of tweets concerning ONedSschat was much higher for these younger students. For example, out of Seth's total 175 tweets at the time of the study, 120 of them (69%) were related to the ONedSschat. Of Diana's total 65 tweets, 56 of them (86%) were ONedSschat related. For both Rosie and Gabriel, the total tweets not related to ONedSschat were not as high as Diana's and Seth's but quite higher than the grade 12 students. Of Rosie's total 150 tweets, 75 (50%) of them were specific to ONedSschat and for Gabriel, this total was 34%. There were no inappropriate tweets, replies, or retweets by any of these students and many of their tweets demonstrate a keen

awareness of a public audience. Figure 3 shows a student team member explicitly sharing that he wants to be a more responsible social media user.



*Figure 3.* Responsible social media

In addition to using social media responsibly and ethically, another characteristic of digital citizenship is an awareness of audience that can be characterized by tweets that invite participation or action and are characterized by professional or useful content. Of the two grade 7 students, one grade 8 student, one grade 9 student and two grade 12 students who make up the current ONedSschat team, the younger students' profiles would be considered to be more professional than the students in grade 12. The younger students' Twitter profiles have a description that references their role in ONedSschat and three out of four of those students have a professional photo for their Twitter profile and a description that identified their interests and affiliation to the ONedSschat. The other younger student used a school logo. In contrast, the two grade 12 students had a professional picture, but no bio or profile description that identified them

as a student ONedSschat member. One of the grade 12 students had three emojis instead of a description.

An example of a tweet that shows awareness of audience specific to ONedSschat is Figure 4 where the student, Charlotte, thanks everyone for their participation in the chat over the course of the 2017/2018 school year and then invites them to join again next year.

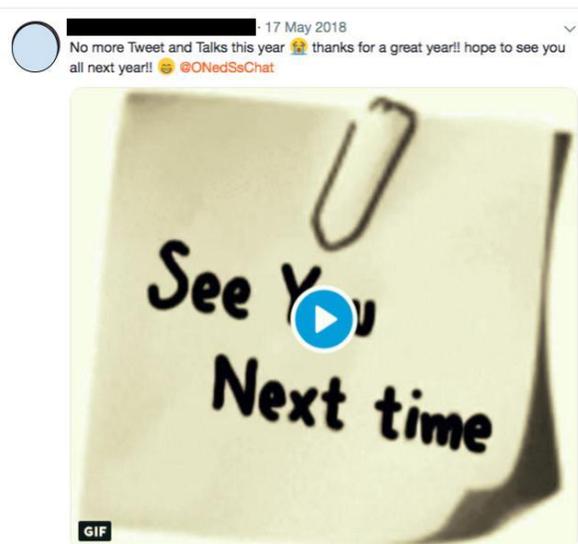


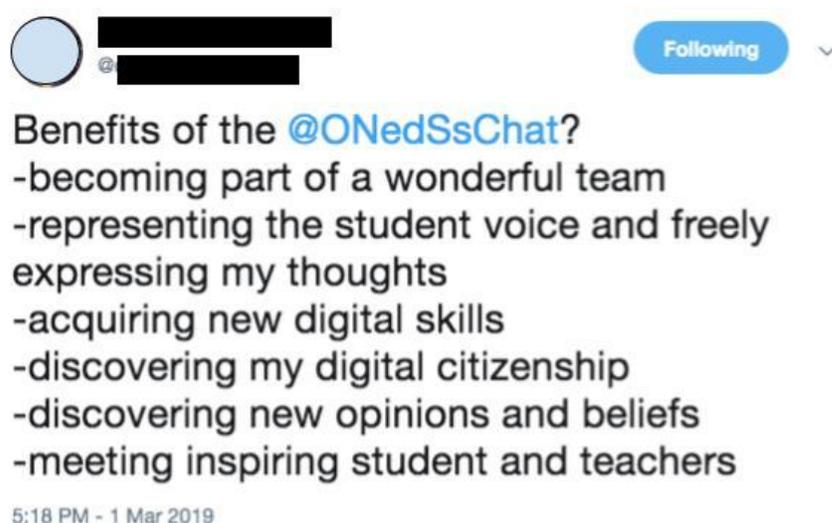
Figure 4. Thanks for a great year

Charlotte also shared a tweet thanking everyone, but directs her tweet specifically at me (Figure 5).



Figure 5. Thank you ONedSsChat

Her tweet is emphatic and positive and shows an awareness of audience that is more specific than general as she is directing her comments to the teacher mentors and team members. One year later, a shift in a more general direction can be seen terms of her awareness of audience (Figure 6). Her open reflection is positive and appropriate, but also is not addressed directly to the ONedSschat account, but rather a public audience.



*Figure 6.* Benefits of ONedSschat according to a student

Gabriel, another grade 7 student, also shows an awareness of audience that is general by tagging his teacher, a notable advocate for climate change, and three organizations (Figure 7).



*Figure 7.* Climate change

Gabriel also engaged in a dialogue with a notable political figure (verified Twitter account) in French (Figure 8) and then thanked him for his time.



Figure 8. Reaching out to experts

His interaction with the political figure is directly related to a school activity. In another instance, Gabriel tweets to a bus company when his local bus does not arrive on time, gets feedback and ultimately action was then taken by the bus company. All three of these examples show the extent to which Gabriel sees Twitter as a very public space to connect with others in a professional manner.

Eric, a grade 10 student, joined Twitter in order to participate in ONedSchat, but also because he was in a Careers Studies class that taught him about using social media professionally. His tweets are dedicated to promoting the chat, but once he left the team, his tweets focused on connecting with professionals in his chosen career and sharing his

accomplishments. Eric received acknowledgement from a professional in his future career in the form of a *Retweet with Comment* (Figure 9), which demonstrates the level of professionalism the student achieved using his Twitter account.



Figure 9. Professional account

The other grade 10 student, Adam, who was a part of ONedSschat for just under a year, and who used his Twitter account since 2013, has a background image which says, “ONedSschat lead, 2017-18”. His profile description also lists his role as an ONedSschat lead as well as “public speaker”, and “workshop presenter”. Like Eric, the professional nature of his profile, background, and tweets demonstrate an awareness of an audience and his digital identity: characteristics of digital citizenship.

It was already noted that Nick’s Twitter account prior to mid October 2017 (when he joined the chat) contained some profanity and tweets with inappropriate content. At one point (Figure 10), prior to joining ONedSschat, Nick is called out by someone on Twitter for an inappropriate comment.



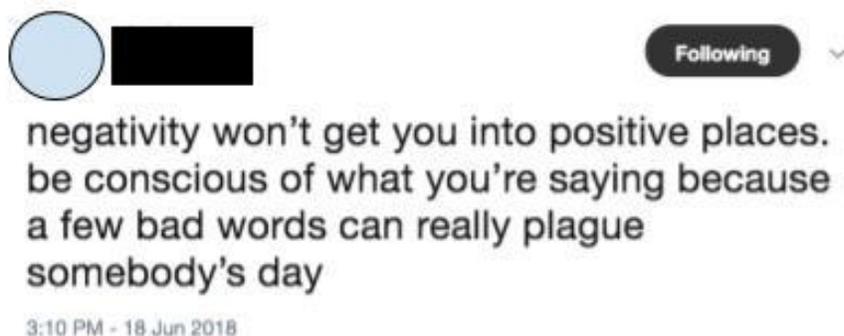
Figure 10: Personal Twitter

Clearly, Nick had directed a comment to his friends, without really understanding that on a public platform such as Twitter, anyone can see and respond. There is, however, somewhat of a shift in the nature of his tweets after mid October 2017, as well as a greater awareness of audience after a grade 3 class commented on his use of Twitter as could be seen in Figure 11.



Figure 11. Awareness of audience

At the end of the school year in which Nick participated in ONedSschat, Nick's tweets showed a definite shift. Figure 12 demonstrates that he not only is aware of a public audience, but he is also mindful that what he says can have a positive impact on others.



*Figure 12.* Shift on Twitter

Nick's more recent retweets (he continues to tweet regularly as of July 2019) share what he is learning, studying, or are connected to various interests (art, history, language, politics) both personally and professionally. Compared to the other students, his profile image is also more informal (selfie of him making a peace sign with his fingers). Nick seems aware of a personal friend-group audience as well as a more public one. In more recent tweets, Nick tags museums and organizations with notably fewer personal interactions than were prevalent before he joined ONedSchat.

Students on the ONedSchat team demonstrated exemplary digital citizenship skills. While nine out of ten students tweeted appropriately and responsibly, the varying degree to which student tweets show an awareness of audience and a sense of professionalism seem to be dependent of the length of time they spent on the chat or on Twitter and the extent to which an adult mentor supported them. The Tweets demonstrated a clear relationship between being a part of ONedSchat and positive digital citizenship behaviours.

#### 4.1.3 Teacher perspectives

I interviewed two teacher-mentors in order to determine the extent to which they had observed students growing in their digital citizenship skills: behaving ethically and responsibly with an awareness of audience. I also included my own observations in this section as part of the narrative. One of my most vivid memories was our very first meeting. We introduced ourselves and our passions, and we set out immediately to co-construct norms of behaviour which would permeate our monthly planning meetings as well as our live-streamed Tweet and Talks. The term *norm* was brought up by a colleague. We then sat back and allowed the students to develop what they thought would be behaviours that would allow the chat to run smoothly. As teacher-mentors, new to the process of giving kids ownership, we helped students with wording, but otherwise the sentiments were those of the students. From that day forward, we never had to address mean or disrespectful behaviour towards one another.

Teacher-mentor 1 observed that students were gaining digital citizenship skills specific to privacy and ethical attribution. She stated,

“Students are learning about privacy and how to keep themselves safe and protected while online.” She also add that students were “learning how to properly attribute the work they are creating, and the works they are using that have been created by others”.

Because she was the one who mentored students who were creating graphics and working on the website, she was able to observe safety, privacy, and copyright skills commonly connected to digital citizenship.

When teacher-mentor 2 spoke of digital citizenship, he referred to students’ level of professionalism and etiquette: He said, “All students were very professional/mature in all their online activities surrounding ONedSsChat.” He added that he felt that Students acted

responsibly, and obeyed laws and etiquette. Teacher-mentor 2 specifically referred to Nick's shift in awareness of audience. He reflected:

“I remember one student who after looking back at their digital footprint, apologised for some earlier posts and promptly curated their social media feed to reflect what they now saw as a new standard for their identity. He recognized and was thankful for the feedback. ONedSsChat gave him a clearer sense of a public audience.”

The teacher-mentor said that this was a moment of “growth” for the student at a key point in his life.

In his personal interview, teacher-mentor 2 also spoke specifically to justice-orientation as part of what he believed to be an effective digital citizen. He said he commented that students:

“Started to critically assess social, political, and some economic structures to see beyond surface causes, sought out areas of injustice to address, awareness of social movements and how they could connect and affect change.”

He felt that students were developing valuable social skills and a social justice orientation.

In a podcast interview, one of the past teacher mentors for the project shared that she was amazed that ONedSschat has come to fruition given the negative attitude many educators feel about social media use in the classroom (Social LEADia podcast, June, 2016). She added that she had seen students develop a keen awareness of audience and digital citizenship skills as a result of participating in ONedSschat.

From a teacher-mentor perspective, then, it is clear that students in ONedSschat used technology, especially social media ethically, responsibly, and with a keen understanding of audience.

#### 4.1.4 Student Perspective

The one student interviewed believed that she learned digital citizenship as a direct result of ONedSschat. She said,

“Participation in the chat helped me create my digital identity and develop skills needed in order to be a responsible presence on social networks. It taught me to create barriers and effectively identify appropriate responses and posts while maintaining an ethical attitude”.

In particular, she refers to her digital identity and the idea of “barriers”. She admits that she is very opinionated and that without my mentorship on the chat and by me in the library, she would not have had an awareness of audience. Upon further discussion, the student adds that in some ways she held back during our YouTube Live webinars, in part because there were younger students on the chat, but mostly because she felt that even if she disagreed with someone, she had to be careful about how she expressed her disagreement in such a public space.

In a podcast interview, Rosie, another student, also made reference to teacher guidance. She shared that her teacher focused on helping students to keep their social media presence “clean” and to post positively.

A second student, Charlotte, explained why she did not have a profile description in relationship to her digital identity. She stated, “I’m not sure who I want to be online...do I want to be a student leader for ONedSchat, a book club leader? I used emojis that represent me somewhat without having to choose.” She added, “I know it is important today to have a professional profile on social media and that employers look at that stuff”. She also noted that she will continue to use Twitter now that she has graduated (and will no longer be a part of ONedSchat), but that she will need to determine her persona on Twitter. She feels she will portray her identity on Twitter in terms of what she does: interests, books she reads, professional accomplishments, but “not who I am”.

Overall, the story the data tells through tweets, YouTube Live webinars, and teacher and student testimonials, is compelling. Students in ONedSchat, during the time they participated in

the chat and beyond, used technology and social media ethically and responsibly and with a good sense of audience.

## 4.2 Digital Literacies

I will now focus on the second research question, *How might a contextual approach (ONedSchat) allow students become more digitally literate?* I examined YouTube Live webinars, student tweets, interviewed two adult mentors of the ONedSchat and a student who participated in the chat for a year and a half. I also looked at the project hashtag, which led me to podcasts where students shared and reflected on the ONedSchat experience. For the purposes of this analysis, I considered digital literacy in using a tool or platform and specifically whether the student used the conventions of the platform efficiently matching the purpose and audience and their ability to use a myriad of modalities, texts, and social practices creatively and flexibly to communicate meaning.

### 4.2.1 YouTube Live Webinars

Increased proficiency in the use of Google Hangouts on Air via YouTube Live, as a demonstration of digital literacy, could be seen over time through the monthly webinars. Ten out of eleven students on the team used Google Hangouts on Air for the first time through this project. The lack of familiarity with the tool could be seen through issues with the mute button in the first few webinars. Each student demonstrated varied levels of difficulty initially, but this difficulty was no longer evident by the second and third time they used the platform. With few exceptions, students were completely focused on speaking to one another, unmuting their microphone where appropriate, but relied on the moderator for their turn to speak.

After being on panel about three times, each of the students on the team began to use Google Hangouts on Air more proficiently and fluidly, using the chat feature to indicate they wanted to speak next. Diana and Seth, who were consistently present for all of the webinars, showed the most progress in their ability to navigate the YouTube Live platform. By May of 2019 they were highly engaged in the live panel conversation with other students, made use of the chat feature within Google Hangouts on Air, and made reference to what they were seeing on Twitter and/or the YouTube chat. This rather complex series of interactive tasks was a stark contrast to their first YouTube Live sessions where they had trouble navigating the platform and keeping up with the conversation in the live on panel. Overall, all of the students seemed very comfortable with the features of Google Hangouts on Air after engaging in the platform three times.

#### 4.2.2 Tweets

The level of proficiency on Twitter is demonstrated when a person composes original tweets using a variety of conventions of Twitter, rather than simply retweeting another person's tweets. Thus, in order to determine increased proficiency on Twitter, I looked at the original tweets of students using the following criteria: text only, text + hyperlink, text + image/GIF, use of hashtag, and retweet with comment to determine whether students used the conventions of Twitter more fluidly.

Nine out of 11 students, regardless of time spent on the ONedSchat team, composed original tweets using a variety of features related to ONedSchat. Two out of the four male students, who had been a part of ONedSchat for a year or more, used their Twitter accounts to promote ONedSchat (retweeting and retweeting with comments), but also to create tweets

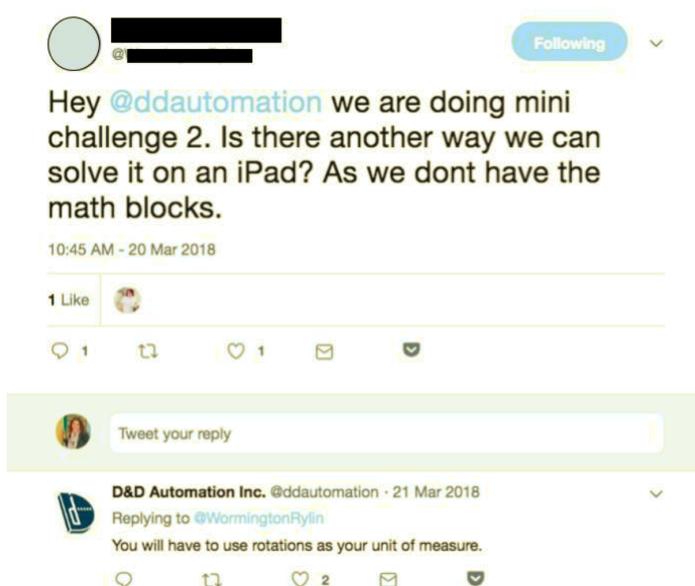
connected to sports and to communicate with others around school events. These constructions were typically: text + image + hashtag.

Students who had Twitter accounts prior to being a part of ONedSschat used more tweeting variations (e.g. text + image, hyperlink, GIF, hashtag) than students who created Twitter accounts for the first time because it was a ONedSschat team requirement. Two other students (one past and one current) who were part of ONedSschat for three months or less and who created Twitter accounts because it was a requirement of ONedSschat, retweeted others and did not actually compose their own tweets.

Students who were part of the *ONedSschat* team for a year or more, even if they had created a Twitter account solely for the purpose of the *ONedSschat*, used the platform with greater proficiency than students who participated for less than a year. They composed their own tweets, used several features of Twitter like images and GIFs, and replied to others appropriately. They also used Twitter to showcase their own accomplishments and to retweet or create a tweet connected to an interest identified in their profile. Examples of this can be seen in Figure 4 whereby Seth used an emoji, a GIF and tagged ONedSschat and Figure 7 where Gabriel used images, hashtags, and tags both teachers and organizations.

Rosie's account stood out from the rest of the students because of her relatively sophisticated tweeting behaviour. Rosie's account was created presumably for her grade 8 class, because she often used a class hashtag and used a class-modelled construction (intro, hyperlink, hashtags), which was identified by looking at other student tweets on the class hashtag. Rosie's first 15 tweets were posted as a result of a school blogging challenge. She used hashtags, presumably created by a class account, and a hyperlink to her blog (which also seemed to be created for a school assignment). Rosie is one of the only students on the team who received

teacher-mentorship in the context of her class. Before she joined ONedSchat, Rosie used Twitter to share Blog challenge and communicate directly with her teacher. In addition to being keenly aware of a public audience, as noted in the digital citizenship section, she also used her Twitter account creatively to reach out to an expert to solve a problem (Figure 13). She addressed the company directly by tagging them and asks a question in order to solve her problem.



*Figure 13.* Reaching out to experts 1

Diana and Seth go beyond the typical use of Twitter related tools by creating videos using iMovie, which they uploaded to the ONedSchat YouTube channel and then shared via Twitter. Figure 14 is an example shared by Diana that invites anyone following her to go and check out the YouTube video.

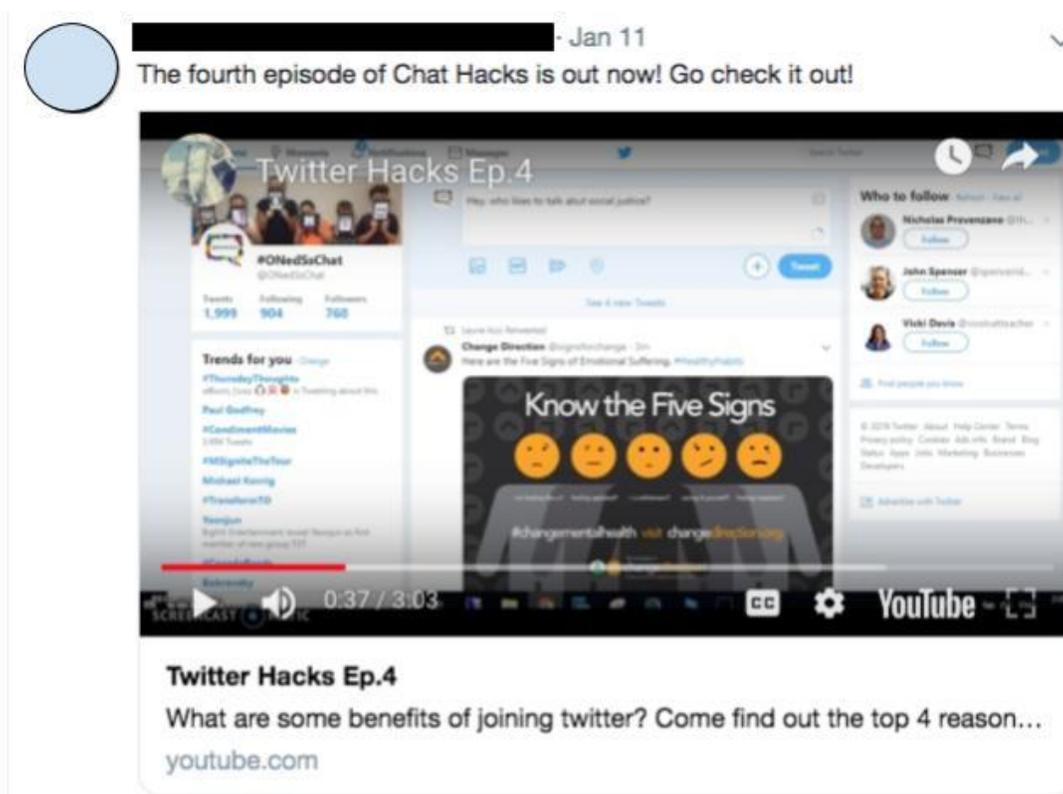


Figure 14. Reaching out to experts 2

In another video, Seth creates a “Behind the Scenes” montage by editing and combining the video contributions of the team. This project required everyone on the ONedSschat team had to learn how to create a video and share it. It also allowed students to share the ways in which they were actively engaged in using technology to contribute to the ONedSschat. The creation of videos to complement the monthly live stream Tweet and Talks, as well as the slow chat on Twitter, shows that the ONedSschat student members had developed a better understanding of the affordances of social networks. Students moved beyond simply composing tweets and responding to each other on a panel by using technology fluidly, creatively, and with purpose.

### 4.2.3 Teacher Perspectives

From the teacher interviewed, it appeared that students learned how to use digital tools at a procedural level to take creative risks, and to create digital content in ways they had never done before. Growth was noted in all student team members, however, digital fluency and willingness to take risks and innovate seemed to be more prevalent with younger (grades 7, 8, and 9) than older (grade 12) students.

When the teacher mentors were brainstorming what ONedSsChat would look like, they talked about the barriers that might exist for the students and the participants (guest panelists) who did not necessarily know how to use Twitter. They were less concerned with people who did not know how to use YouTube, because it was assumed most students would be familiar with the YouTube platform. The teacher mentors did, however, need to spend time coaching the student team on how to use Google Hangouts and Hangouts on Air, which is the platform through which YouTube streams the live video. One of the teacher mentors, when speaking to skills students had attained under the category of digital literacies, stated: "...students developed, at a minimum, an awareness of [several tech and social media tools] and many developed a mastery so they could teach others". Teacher mentor 1, in a personal interview identified specific platforms in they had seen regarding student growth and development of digital literacies including:

- Twitter (handles, profiles, hashtags, icons, Twitter poll)
- Canva - graphic design platform
- Google Docs, Sheets, Hangouts
- YouTube Live

- Dotstorming
- iMovie
- WordPress (currently working with one student lead to teach him how to work on our website)

Teacher mentor 2 shared that he had seen exponential growth in students' ability to use digital tools, specifically "using online tools and websites to find and record information online and using information in different media".

The innovation and risk-taking aspect of digital literacies were also noted by the teacher mentors. Teacher mentor 2 noted that beyond the tools themselves, the current ONedSchat team recognized and understood the concept of digital footprint/identity, and found experts online with whom they made contact. Teacher mentor 1 shared that Seth (currently in grade 8), who had been with the ONedSchat team from the beginning, learned to how to create a Twitter bot that he programmed to automatically tweet our information about ONedSchat so the team could spend more time focusing and engaging with students. The teacher mentors had never explored nor knew anything about Twitter bots but were open to Seth's proposal. Seth engaged in independent research about how Twitter bots would work and what technical requirements were needed. Had the ONedSchat teacher mentors imposed a limitation on tools and platforms used, and not allowed students the freedom to make suggestions, Seth may not ever have had the courage to propose the Twitter bot idea.

I was amazed when students, who had never used Twitter before, created "Chat-Hacks" or how to videos to help classes and other students navigate Twitter in order to participate in the chat. Their videos were professional and informative, using iMovie, YouTube and Twitter in order to communicate their message. As a team, we discussed the possibility of the students taking over the meetings and moderating the chat, because we were confident in their digital

literacies skills. Students taking over the ONedSschat sessions had started to happen about 6 months into the 2018/2019 school year. Diana completely ran Slow Chat portion of ONedSschat by creating the graphics and scheduling the tweets to be posted using Tweet Deck once a week. In summary, based on teacher reported data, students' digital literacy skills were significantly greater as a result of being on the ONedSschat team since they had never used these tools prior to joining ONedSschat.

#### 4.2.4 Student Perspectives

In a podcast interview for the #OnEdMentors show, one of the students (Diana), stated emphatically how much she learned about technology as a result of ONedSschat. She first said, "ALOT" when asked how much she had learned about technology tools and platforms and then added,

"Coming into the chat I basically had no idea how to run Twitter let alone use tools like Tweetdeck to make tweeting more effective and easier. I also had no idea how to use Google Hangouts and it was definitely a very big learning curve".

She went on to state that she felt these tools will help her in the future.

Digital literacies also involve an understanding of how to use a tool beyond a procedural level, which was especially evident for students who were involved in ONedSschat for a year or more. In addition to learning about platform and tools, Diana, who created a Twitter account in the same month she joined the chat, stated:

When I joined Student Chat I really saw the positive side of [social media] and I was like, Wow. This can be used positively and it opened different doors for me. This can be better for students than what I was shown. I kind of wish that when I was younger this was introduced to me because I feel like I could have done so many more things with it. (Casa-Todd, October 27, 2018).

Diana made reference to the limited nature of traditional school in guiding students' use of social media as a tool for learning.

Similarly, Rosie claimed, in a podcast interview, that when she started high school, teachers assumed that teenagers already know about social media. She stated that the attitude of her teachers is that "social media is a thing for kids to entertain themselves, but they don't really use it as a tool for learning" (Casa-Todd, 2018). She also noted that everything she learned about social media happened in her grade 8 class and as a result of ONedSschat. In another podcast, Rosie stated,

"I knew when I was getting involved with social media that it was a place to connect with your friends and your family, but honestly, I never thought I would be sitting here now...uh, in the future like discussing with other students and teachers" (Casa-Todd, 2019).

She expressed that even sharing on a podcast together with a teacher-mentor from Ottawa is something she never imagined possible. She added: "It's so cool that something I thought was a place to mess around with my friends is now a way that we learn and we share and we communicate" (Casa-Todd, 2019). Rosie has clearly moved beyond basic use of Twitter and YouTube Live and now used these tools to construct meaning and connect with others.

In a personal interview, Charlotte admitted to being severely lacking in technological skills. She said that she was the type of person who has used the same PowerPoint presentation since grade 8, changing the information, because she was too scared to use anything else. She stated,

"Everything I know about social networks and digital citizenship is due to my involvement in the chat, since this was my gateway to the online world. Among others, I learned how to use Twitter and Google Hangouts as well as how to behave while using social media."

She also acknowledged that she learned how to use Canva to create images, but that it took her so long because she had never used it before. Unlike the younger students, Charlotte did learn how to use a variety of tools at the procedural level, but did not develop flexibility and creativity beyond the basics. All the students demonstrated varying levels of proficiency of tools, as well as an understanding of how those tools could be used to communicate effectively -hallmarks of digital literacy.

### 4.3 Student Voice and Agency

I will now explore my third research question, *How might a contextual approach (ONedSschat) influence student voice and agency?* To do this, I examined YouTube Live webinars, student tweets, interviewed the two teacher mentors and one student lead. I also looked at the project hashtag, which led me to additional teacher and student perspectives. Three main themes which emerged as I listened, read, and viewed the data: students developing confidence in expressing their views, students taking an active role by being co-designers in their learning, and students using their opinions to inspire others or impact change.

#### 4.3.1 YouTube Live Webinars

The YouTube Live webinars exemplified student team members developing confidence, taking an active role in the direction of the conversation, and using their opinions to inspire change. The more frequently the students participated as panelists in our online Tweet and Talk YouTube Live webinars and the longer they were part of ONedSsChat, the more confident they were in expressing their opinions. This was evident when watching the first YouTube Live event, compared to a middle panel and most recent discussions.

In the first Tweet and Talk in October 2017, for example, Seth, one of the founding ONedSsChat student leads who was in grade 7 at the time, had to be prodded several times by the adult moderator. When he did respond, it was with an, “Um, ya” followed by an incomplete sentence. Seth was prompted five times by the moderator and each time, there was a clear hesitancy in what he said and his body language. He did not look into the camera and appeared to be extremely uncomfortable. The other two male students, one in grade nine and one in grade 11, did not volunteer to respond and required adult prompting as well. Of the three female participants in the first Tweet and Talk, Lisa (grade 11), was by far the most confident, and because of this, most of the other students let her do most of the speaking while they nodded in agreement. During the first Tweet and Talk YouTube Live panel discussion on October 17th, the teacher-moderator literally said, “I am going to have to call on someone because there is a moment of silence here.” In December 2018, students demonstrated greater confidence and participated more frequently. They no longer let one person lead the conversation, but rather would build on the ideas shared by others.

Some of the topics lent themselves to students being more forthright with their opinions. The more personal the topic, the more they shared of themselves publicly and the more there was a sense that they were using their voice to inspire others. By the fourth panel discussion, there was a shift from students solely expressing their own opinions to expressing their opinions to inspire others.

This shift could be seen in several of the Tweet and Talks but especially in the *Pay it Forward* segment on January, 2019. Diana, stated, “We have the power to change someone’s feelings for the better”, then Rosie added, “When you make someone happy, it’s a chain reaction and you can make yourself happy”. Charlotte contributed to the conversation both in English and

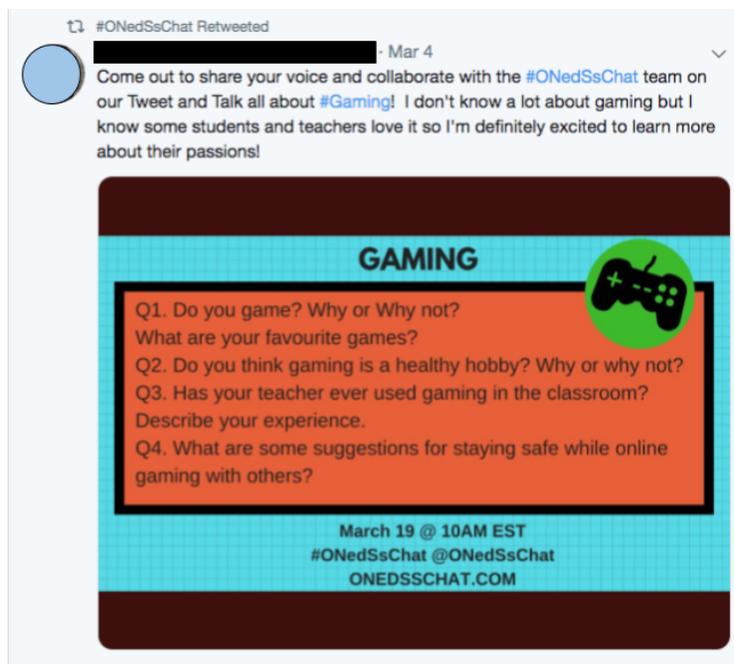
French, speaking to the importance of building a better world by engaging in acts of kindness.

The topic of *Paying it Forward* allowed students on the team to share not just their opinions, but also nuggets of inspiration for the grade 3 students on the panel and the audience at large.

#### 4.3.2 Tweets

By looking at student Tweets, I was able to see the extent to which students developed confidence in expressing their views, took an active role by being co-designers in their learning, and used their opinions to inspire others or impact change. Students who had more experience and mentorship in the ONedSschat, and who were members of ONedSschat, used Twitter to reach out to others, articulated ideas and inspired others more than students with less experience with greater frequency.

Students confidently tweeted out to others and experts. Figures 7 and 8 demonstrated how Gabriel was confident enough to reach out to a political figure, and Figure 9 showed Eric reaching out to Law Enforcement officers. In Figure 15, Diana tweets out an invitation to other students to “share your voice and collaborate with the #ONedSsChat team” on the topic of gaming. What is further significant about this tweet is admission that she does not know a great deal about gaming, but believes she will learn much more by listening to the perspective of others and thus the invitation for others to share their voices from which she can learn.



*Figure 15.* Share your voice re: Gaming

In other instances, students used Twitter to inspire others. In Figure 16, Adam wishes good luck to other grade 10 students writing the OSSLT, using the phrase, “You’ve got this”, adding a smiling happy face GIF and including the provincial hashtag for Ontario, #onted, to have a broader impact.

Good luck to all other Grade 10 students writing the #OSSLT today! You've got this! #onted



Figure 16. OSSLT encouragement

In Figure 17, Charlotte responds to one of the ONedSschat question prompts with the notion that we have the potential to inspire others who might need a little bit of “sunshine in their lives”.

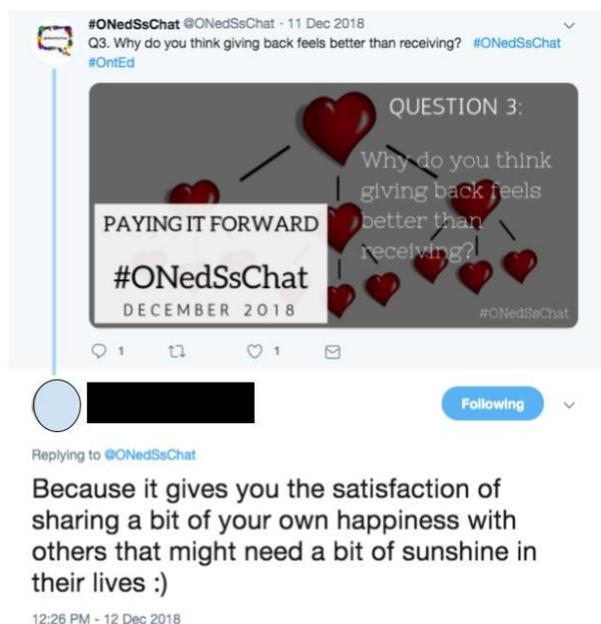


Figure 17. Inspire others

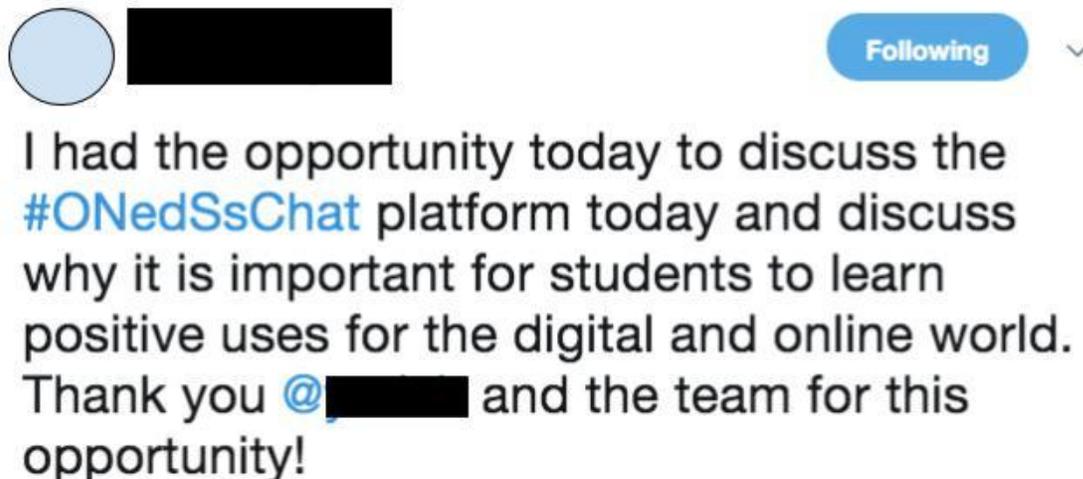
In the same chat, Diana shared via a Tweet, “Little things are so important and can change someone’s day! If you want to pay it forward help someone, smile at someone and give compliments.” In this response, she shares an opinion, but also two ideas for helping to make someone’s day brighter.

In the case of one student, she actually responded to the impact of sharing her voice with others very explicitly. Rosie shared, on Twitter, how she believed ONedSsChat amplified her voice (Figure 18). She expresses that it was a teacher who believed in her voice and who asked her to become a student leader for ONedSsChat. Rosie added how amazing and what an honour it is for her to be able share her voice with other teachers and students.



*Figure 18:* Student voice reflection

In another example, Eric indicated on Twitter that ONedSschat provided him with an opportunity to speak at a conference. In Figure 19, Eric articulated that he was grateful to ONedSschat for the opportunity to discuss the positive uses of social media with a wider audience. His tweet exemplifies confidence in sharing his voice in person as well as online as he thanks the organizers of a district-wide event for the opportunity to share his opinions and ideas.



*Figure 19.* Discussing ONedSschat

This level of confidence was not necessarily ubiquitous for all ONedSschat students. When students made reference to having the confidence to share their voice, they were comfortable doing so in the Tweet and Talk YouTube Live discussions, but not necessarily Twitter. This is evident primarily for two grade 12 students. Emily, a student who only joined Twitter for the purposes of the chat, did not create a single tweet: six out of her total of seven tweets are retweets related to ONedSschat. This is in contrast to her reflections on a podcast where she talks about how important ONedSschat is to her in terms of allowing her to share her voice with other students and gaining the perspective of others. This discrepancy could also be seen with Charlotte, the other grade 12 student who stated in a personal interview that she felt like she could articulate her opinions more effectively on Livestream YouTube panel than on Twitter.

Two students, Diana and Seth, took a more active role on Twitter, becoming co-designers, however it was difficult to monitor their tweets and contributions. They were given the passwords to the official ONedSschat account so that they could post graphics for our Slow

Chat (a Slow Chat is an invitation to respond to questions posed over time, rather than in a finite period of time which is typical of a Twitter chat). Because they had the same password as teacher mentors, it would be impossible to determine which tweets were shared by them, and which came from the teacher-mentors. The topics selected for the tweets and the questions shared via Twitter were generated by the Diana and Seth themselves, so they saw themselves and their voices in multiple aspects of the Slow Chat experience.

There were several layers to students sharing their perspectives. Students on the ONedSchat team created questions and discussed them on panel, but other students were also invited to be guest panelists, while any student could also participate with their classes. Several tweets shared by adults and classes to the #ONedSchat hashtag demonstrated the extent to which student voice went beyond just the ONedSchat team.

In Figure 20 an educator learning about ONedSchat shared, “this IS what amplifying Ss voice is all about - a platform for Ss to build a positive social online presence where they network, learn, develop understanding, confidence.” She expressed her excitement by including the hashtag, “#micdropmoment”. The tweet is in response to the fact that a few students presented an overview of ONedSchat at a Digital Citizenship conference and exhibited confidence as they spoke about their perceived benefits of ONedSchat.



Figure 20. Sample of Chat providing student voice

Student voice was also amplified for student guest panelists and students participating with their classes. Both Figures 21 and 22 show examples of how students shared their opinions and perspectives by being participants and panelists. In Figure 21, a school district invited students to share their voices by tweeting, “We are looking forward to hearing our students’ voices for the final #ONedSsChat of the year.” This tweet refers to fact that students from the District were going to be guest panelists, which is another avenue for students who are not on the team to share their ideas and perspectives.



Figure 21: Invitation for student voices

Another tweet invites other students from the district to share their voices on the important topic of body image. Figure 22 showcases just one example of what class participation of student voice looks like. The teacher chose to capture her students' voices and opinions on chart paper and tweet them out as images. Students in the teacher's class could see their ideas captured and published for the ONedSschat team, as well as for the public. Other teachers used a class account and captured their students' voices by using initials or first names.



### 4.3.3 Teacher Perspectives

The other two teacher-mentors and I intentionally encouraged students to use their voices and become co-creators of the ONedSschat process. The monthly procedure for the chat demonstrates the extent to which students were involved in the process:

1. Students, both on our team and beyond, are invited to generate and vote for discussion topics by adding them to our Dotstorming board (a collaborative digital bulletin board).
2. Students on our team and beyond are invited to vote for their favourite topic, which is posted as a Twitter poll in our Twitter feed (the poll lasts 5 days).
3. ONedSsChat Student leads then generate the questions we discuss each month during our monthly team meeting - we brainstorm questions, colour code the questions we feel will generate the most conversation, discuss our differences of opinion, and build consensus. Student Leads take turns designing the chat question graphics we use each month.

Teacher-mentor 1 reflected on our monthly procedures as an opportunity to allow students to discuss topics of interest to them. She commented, “ONedSsChat has created a space for students throughout Ontario to share their voices with one another and discuss topics that are important to them”. She added that each month there is an opportunity for students from across the province or from around the world to share their perspectives and opinions as guest panelists. In a podcast, one of the teacher mentors cites ONedSsChat as an opportunity for students to share their voices, which provide “opportunities for collaboration and bringing their voices to the table for educators to rethink what we are doing in the classroom” (Casa-Todd, June, 2019). She also shared that ONedSschat was an opportunity to see each other from across the province, the country, and in some cases the world. In the #ONedMentors podcast (Daniel, 2019), the host shared that, as a teacher participant and onlooker, she found it fascinating to see how

ONedSschat allowed for students to “engage with and add a layer to the conversation” (Daniel, 2019). The depth of the conversation to which the host referred, could be seen primarily in the Tweet and Talks.

Another area where we saw students increasingly develop agency and use their voices more confidently was in creating questions to be used for the Tweet and Talks. This is an area where students were initially given a great deal of support by the teacher-mentors and gradually the support was not needed as students got better and better at asking questions. The procedure consisted of students adding questions to a word document, with the teacher-mentors prodding and prompting so that the questions would be rich enough to elicit discussion. After students engaged in the process for about four meetings, they were able to create questions that were more open ended. The process of creating questions for a topic also took less and less time, as students became more experienced. By May of 2019, it took us half the time to create questions and therefore some of our meeting time was dedicated to completing other tasks such as scheduling tweets.

Teacher-mentor 2, in a personal interview, agreed that students had both the autonomy and agency to direct the chat by creating questions and share their opinions, but also challenged the idea that students had complete autonomy. He said,

Student leaders had input and final say on most decisions, particularly when it came to topics of discussion, chat questions, and promotional materials explaining the chat and recruiting partners. Students had less voice/agency over organisational/structural decisions (input but less agency on code of conduct, meeting organisation, etc.).

Interestingly, none of the students mentioned that they did not have agency over their own learning at all.

#### 4.3.4 Student perspectives

The student interviewed, as well as students who reflected on podcasts, felt that sharing their voice and perspective were a major advantage to being a part of the ONedSschat team. The student lead interviewed commented that, “the chat does a wonderful job at providing all students a way to express themselves and form well-thought opinions”. She also stated that she was able to contribute ideas and opinions when developing monthly topics and creating questions and that she felt she was an active member during monthly meetings. These comments showed that she believed herself to be a co-designer in the process.

Emily, a student who reflected in the podcasts, shared how much she valued the experience of sharing her opinions on topics which she found important. She said that she appreciated the experience of being a student panelist so much that she asked to be on the team. This level of appreciation was true for Gabriel as well, as he was first a guest panelist, and then asked if he could join the team. Emily added a comment about the extent to which she was hesitant to come into ONedSschat because she did not know what to expect, but noted that, “Chat have become a safe space for me” (Daniel, 2019). She cites the reason for this is that she felt supported, but so too because she was able to learn from others and realize that her perspective matters but so do those of others. The results suggest that, on many levels, ONedSschat created an opportunity for increased student voice and agency.

#### 4.4 Student Digital Leadership

To answer the final research question, *How might a contextual approach (ONedSschat) allow students to become leaders in online spaces*, I examined YouTube Live webinars, student tweets, and interviewed two teacher-mentors and one student lead. I also looked at the project hashtag, which led me to additional podcasts and tweets. The results for student digital

leadership built upon some of the results specific to student voice and inspiring change that was identified in the previous sections. Digital leadership results will also consider the extent to which student leads for ONedSschat are role models for other students. They used technology, especially social media to model digital citizenship, showed flexibility using platforms and tools, developed a keen sense of digital identity, and used their voices to network, create community, and inspire change.

#### 4.4.1 YouTube Live Webinars

One aspect of leadership in a digital context, especially in social media, is encouragement and support of an online community. When examining student behaviours in the YouTube Live Tweet and Talk webinars, both outwardly and as a participant with access to the chat, it was evident that our students not only shared their perspectives on the various topics with increasing confidence and built upon the ideas of others, but they also took the time to encourage one another within the Google Hangouts platform. They would use the chat feature to say, “Great point” or “Love that” and made a specific point of encouraging the younger guest panelists. When we went “off air” there were always a few minutes dedicated to thanking and celebrating the contributions of others. This celebration and gratitude sometimes made its way onto Twitter. Students sharing their positivity online could be viewed as role models inspiring others to be positive online.

The students also used their voices to network and inspire change. This type of inspiration was reflected particularly in one special Tweet and Talk episode live streamed through YouTube Live. A school division in Manitoba contacted us to learn more about ONedSschat so they could learn about how to create their own student-led chat. ONedSschat students were invited to participate on a volunteer basis, outside of our normal schedule. Three

students, Seth, Emma, and Rosie, made themselves available for the 15-minute mock chat and the debrief which happened after the ONedSschat live stream. One important thing to note is that the students from Manitoba were in grade 10 and our students were in grades 7 and 8 respectively; which demonstrates confidence. The chat itself was on the topic of leadership, so ONedSschat student responses gave great insight on their opinions about leadership. Rosie defined leadership by highlighting the importance of community. She said, “We support each other and bring new meaning” and added that leadership is about “Setting an example for other students and inspiring them to make a change.” Seth added that leadership can give others a voice. In particular, he suggested that leaders, “go to the quieter ones for their perspectives” instead of going to people who are the loudest. Emma added to what she thought exemplified leadership, “Someone who is inclusive and someone who has a voice and draws voice of other kids.” To this, Rosie added, “Stepping down to give others a chance is leadership in itself.” It was easy during this Tweet and Talk to see that the insights about leadership were being practised by the ONedSschat student team during the Live stream panel. One adult guest on panel for the Paying It Forward segment reaffirmed this idea when she stated, “All these stories of our students paying it forward are so heartwarming. Our students will change the world for the better!”. Every expert guest from May to October, 2018 explicitly expressed admiration for the student panelists and commended them for thoughtfully and articulately expressing their opinions. Students used technology and social media to use their voices to network and inspire a new practice for students in another province, in addition to building community with students they have never met in person, only virtually.

#### 4.4.2 Tweets

Digital Leadership was exemplified by students on the ONedSschat team as they modeled digital citizenship, demonstrated flexibility and creativity using online platforms, and created a professional and positive digital identity. The results for these skills were already listed in the previous sections. In addition to being role models for digital citizenship, digital literacies, student tweets demonstrated the extent to which the ONedSschat team became effective role models who used technology and social media to build community, network, and inspire others.

Figure 24 is an example of the kind of tweet that demonstrates awareness of audience and inspires others. Lisa demonstrated leadership skills even before she joined ONedSschat. From the beginning, she inspired the younger team members as well as students who saw the way she was using her Twitter account.

*Figure 24.. Inspiring Tweet*



In Figures 25 and 26, Rosie and Diana also use Twitter as a platform to demonstrate positivity and as a way to inspire others.

*Figure 25.* Inspiring others 2



### 26 Inspiring others 3

Replying to [@ONedSsChat](#)

**Little things are so important and can change someone's day! If you want to pay it forward help someone, smile at someone and give compliments [#ONedSsChat](#)**

9:18 PM - 24 Dec 2018

There is also evidence to suggest that students believed they have a responsibility to teach others. This could be seen when Diana's tweet informed students about the importance of detecting fake news during our Media Literacy Tweet and Talk (Figure 27)

Figure 27 - Fake news

Replying to @ONedSsChat

Detecting fake news is an important skill, especially as a researcher/student. When I see a website I make it a priority to ask questions before jumping to conclusions. Who wrote this? Do other sites have the same information? Do they have real evidence? @ONedSsChat #medialitwk 

10:03 AM - 27 Nov 2018

Twitter was viewed as a place for connecting with others and building community by some students in ONedSschat. Eric was the most explicit about his view on Twitter. In a tweet replying to a community services officer (Figure 28), he shared that he thought police agencies should use Twitter to connect with their communities, share important information, spread details about safety events and humanizing police officers.

*Figure 28* Value of Twitter

Replying to @TheRailCop

**Twitter is a very important tool that police agencies can use to connect with their communities. By sharing important information (such as rail safety), spreading details about your safety events, and letting the public get to know you (humanizing the badge)**

10:34 PM - 1 Aug 2018

1 Like



He further added that Twitter is a great way to connect to network and learn firsthand from people in their chosen career (Figure 29). He even adds how lucky he felt to connect with the officer via social media.

*Figure 29* Twitter to connect



The extent to which students really did inspire others could also be seen by looking at the #ONedSschat hashtag. As an example (Figure 30), one teacher commented that if it was not for the ONedSschat, his students would not have delved more deeply into the UN's Sustainable Development goals.

*Figure 30* Sustainable development goals

My Ss and I last year would likely not have gone into an in-depth discussion about the UN's 17 Sustainable Goals had it not been for the fact that it was a scheduled @ONedSsChat, which was an engaging way for them to consider their global impact.

A director of Innovation from California tweeted (Figure 31) that he felt the students did an excellent job, citing ONedSschat as "powerful stuff".

*Figure 31* Powerful stuff

Powerful stuff here. Great discussions on citizenship by students with an authentic audience. Well done today!  
[#ONedSsChat](#) [#edtech](#)



Also, every guest expert, as a follow up to a Tweet and Talk, thanked and commented on the students' thoughtful and inspiring contributions. Figure 32 provides an example from our topic on #FridaysForFuture and saving the environment and the extent to which the ONedSschat team have given her hope for the future.

Figure 32 Hope

Thank you [#ONedSsChat](#) for having me today. Speaking to so many smart, motivated students really gives me hope! Let us go back to our individual lives more energized to fight [#ClimateChange](#) !

10:49 AM · Apr 9, 2019 · [Twitter Web Client](#)

### 4.3.3 Teacher Perspectives

Teacher mentor 1, Teacher 2 and I observed ONedSschat students exemplify digital leadership. We noticed at least five ways students demonstrated leadership both on and offline: responsibility, initiative, passion, effective communication skills, and effective role modeling for other students. Students demonstrated responsibility by acting with integrity and accountability. Teacher mentor 1 noted that students owned up to times they did not meet their commitments. She commented that students demonstrated leadership when they stepped down from the group, “when they felt they could no longer be contributing members”. Students could also be seen on Twitter once a week responding to others and promoting the chat. Teacher mentor 2, shared his observations, “All students felt like it was their responsibility to step up and be an exemplary leader that their peers could look up to and trust”.

Students showed initiative by constantly trying new strategies and learning new skills (e.g., tech and social) to promote and enhance #ONedSsChat. Teacher mentor 2 stated, “students not only learned new digital skills, but then created Chat Hack Videos in order to teach those skills to others” thereby showing leadership in teaching and learning using digital platforms. Teacher-mentor 1 added that she saw students, “develop confidence, take risks, show initiative and move from needing direction to becoming self-directed in their own learning”.

With respect to communication skills, Teacher-Mentor 2 shared that he saw “amazing growth from all students” and that “most started out shy and unsure within planning meetings and it did not take long until they were comfortable communicating with everyone.” This confidence was reiterated by teacher-mentor 1 who stated that students ‘did a wonderful job discussing all sides, compromising, and coming to decisions that were best for

#ONedSsChat”. He also observed that ONedSschat had become an “open community of learners that invites others to contribute in positive ways to further conversations leading to new learning and growth”.

Students on the ONedSschat team demonstrated passion: they “consistently showed up for planning meetings and shared their passion for student voice and change with the group and the greater student community” according to teacher-mentor 1. Teacher-mentor 2 added, “I loved how the passions from the student leaders seeped into our topics and conversations and they stepped up their leadership roles”. I too noticed that students selected topics about which they were passionate, and showed a willingness to learn when they did not know as much as a peer.

Teacher-mentor 2, in addition to commenting on the also connected digital leadership to an orientation towards justice or causes students selected as chat topics. He stated, “They very much wanted to create questions around the #FridaysForFuture movement which saw students striking for climate and so asked if we could switch topics one month in order to address this”. They also chose topics such as Music and Mental Health, Gaming, Body Image, and Paying it Forward in year two of the chat. In each instance, students strongly expressed their opinions in such a way that they seemed keenly aware of an audience who could benefit from their knowledge.

Finally, teacher-mentors and teachers who participated in ONedSschat observed that students believed their role was to inspire others. Teacher-mentor 2 stated, “I heard wonderful feedback online and at conferences from students and teachers about how the student leaders inspired them to use their voice and make a difference.” He added that he saw adult-student, student-student and adult-adult mentor relationships form throughout the process. He further

noted, “Many of our senior/experienced students immediately took on the mentor role with new/younger students - showing them new programs, procedures and acting as sounding boards for their questions and ideas.” Additionally, Teacher mentor 2 spoke of delegation, empowerment and how he noticed that, “students learned to ask for help from their peers and mentors and created a very supportive environment that empowered all members.” As teacher-mentors, other educators who participated in the ONedSschat would often express to us how impressed they were by the student team and their digital leadership. Our student guest panelists far exceeded the number of chats we ran partially because teachers were inspired by the ONedSschat team and wanted their students to have the opportunity to participate.

#### 4.3.4 Student Perspectives

The characteristics of leadership perceived by teacher mentors (responsibility, initiative, passion, effective decision-making skills, effective role modeling for other students) were echoed somewhat by the one student mentor interviewed and four students who reflected publicly in podcasts. The common themes shared by Diana, Rosie, Emily and Seth in their open reflections during a podcast that could be connected to leadership included:

- Sharing that they felt like the chat was “bigger” than themselves.
- Recognizing that the power of the chat is gaining the perspective of others (experts, guest panelists, other team members).
- Being able to network and communicate with other students in the world.
- Foster leadership skills in themselves and inspire leadership in others.

Four students spoke to the leadership skills they had gained in a podcast conversation. Diana shared that she has always been interested in student voice and leadership and considered herself someone who loves to take chances and opportunities. She talked in the

podcast about leadership skills, in particular, and how ONedSschat has helped her to become a leader. She said she learned, “leadership skills that go outside of the normal classroom”. She mentions public speaking skills, and what it meant to work as part of a team. She also noted that creating questions for the slow chat helped her to be more responsible. Rosie said that her grade 7 teacher invited her to join ONedSschat, because she felt Rosie possessed technical and leadership skills that would contribute positively to ONedSschat. Seth was also approached by his teacher to join ONedSschat and claimed that he was “not camera shy” and had participated in a variety of clubs. Seth also reiterated that his public speaking skills and tech skills have improved immensely as a results of ONedSschat. Finally, Emily was invited to be a panelist on ONedSschat because she was an active leader in our Jack.org club at school and was passionate about addressing mental health issues. Emily stated that she found so much value in being a guest panelist and sharing her ideas about music and mental health that she wanted to become part of the team. She felt that the topics were ones that were valuable to students.

Students commented on the extent to which gaining the perspective of others through online platforms made a significant impact on them as leaders. Rosie explicitly made reference to the fact that she came from a very rural area and that being a part of ONedSschat made her “into a new person” because she understood that other people had different opinions. Seth added that being a part of ONedSschat allowed him to look at the world in a different way and noted that for some of the topics covered, he needed to do research to learn more about the topics. During the OnEdMentors Podcast, Emily shared that gaining the perspective from the expert panelist represented an opportunity that she would not otherwise have had because she would have never “met [the panelist] on the street”. Emily referred to it specifically as “building a network” (Daniel, 2019).

Student testimonies in the podcast also indicated that they believed that their role was to inspire other students. Diana shared how thrilled she was that her role as leader could push and inspire someone else (Daniel, 2019), and Seth agreed that it was “good for students to see other students in a role of leadership” (Daniel, 2019). In a personal interview, Charlotte revealed that she did not believe herself to be a digital leader because she did not feel she was proficient on Twitter and yet she did believe she exemplified leadership when she participated in panel discussions.

## Chapter 5. Discussion

### 5.1 Digital Citizenship

The results of this study support that there is a positive relationship between student digital citizenship behaviours and participating in the ONedSschat. In particular, increased positive digital citizenship behaviours specific to respectful interactions, increased civic engagement, mindfulness of a public audience, and a professional digital identity were observed. Students in ONedSschat were not only a part of creating the norms of behaviour at the onset of the chat, but because these norms were continuously reinforced both orally at the beginning of each Tweet and Talk, and then again on Twitter, the norms of behaviour were readily adopted by nine out of ten of the students on the team. During the Tweet and Talk, all students were respectful and supportive of each other, as well as towards guest panelists. Their respectful behaviour then extended to their interactions on Twitter for nine out of ten students. These findings are consistent with those of Jones and Mitchell (2016), who suggested that having youth practice engaging in perspective taking, practicing using respectful language to voice opinions, and being supportive when others express their opinions online, are more effective for fostering digital citizenship skills than lecturing to students about what kinds of behaviour they "should not" exhibit. Interacting online to practice digital citizenship, rather than just creating norms of behaviour, was stressed by Couros and Hildebrandt (2015) in the Digital Citizenship in Saskatchewan Schools Ministry document and reported in Ribble's Nine Elements of Digital Citizenship (2015) as more effective than teaching digital citizenship in isolation.

The presence of a teacher both in the Tweet and Talk and on the ONedSschat Twitter feed may have contributed to the absence of problem behaviour and posts, a result that is consistent with Vohra's (2016) case study looking at Twitter use in a grade 8 mathematics class

as well as Snyder's (2016) Narrative Inquiry. Furthermore, parental involvement was found by Wang (2018) to be a significant factor influencing positive online behaviours. Even though one student did tweet profanity, prior to joining ONedSchat, his behaviour changed when a teacher-mentor spoke to him and reminded him of our norms of behaviour.

There was also a clear indication that student members of the ONedSchat team were aware of a public audience and developed civic mindedness, two elements of digital citizenship. When you consider the tweets of the younger students, Gabriel, Seth, Diana, and Rosie, it is clear that there they were tweeting for K-12 student and/or educator audience. In particular, Gabriel's tweets about garbage (Figure 7) in which he tags community members, and Rosie's tweet asking for help, are evidence of ISTE's statement that digital citizenship is about being an active citizen who sees possibilities instead of problems and risks as they curate a positive digital identity (2019). The younger students also seem more comfortable tweeting about ONedSchat and their personal interests, even knowing that a wide audience would read their tweets. Live panel discussions were inherently public and students practiced positive social skills by interacting respectfully by building upon each other's ideas when they agreed, and respectfully disagreeing when they did not. These results reinforce the idea prevalent in previous research that digital citizenship is an extension of traditional civic participation (Choi, Glassman, & Cristol, 2017; Kahne, Lee, & Feezell, 2013; Jenkins 2017). Students and teacher-mentors in interviews and in podcasts referenced opportunities within ONedSchat to pursue personal interests and engage in real-life experiences as they learned with experts and other students which Gleason and Gillern (2018) suggest should be a part of a digital citizenship curricula. Students in ONedSchat seemed keenly aware of an audience who could benefit from their knowledge, especially during the monthly Tweet and Talk YouTube Student reflections which

revealed a shared sense of community, which Ryland (2018) argues is essential to being a digital citizen.

In the case of the older students, awareness of audience was inconsistent, especially on Twitter. For example, Lisa, was well aware of a wider audience well before and after she joins ONedSchat, while Nick's Twitter behaviours demonstrate a shift from using Twitter to interact with his friends, to a greater sense of a public audience. Both the male students in grade ten were keenly aware of a public audience. Whereas Adam, like Lisa, had demonstrated this awareness well before and after he joined ONedSchat. Eric, who joined the Twitter specifically to be a part of ONedSchat received mentorship in school by a classroom teacher. Both Eric and Adam create a professional identity that seems to focus on career choices which is consistent with Junco (2014) who states in, *Engaging Students through Social Media: Evidence Based Practices for Use in Student Affairs*, that people engage in self-presentation as the process by which people try influence how others perceive their image through social interactions. It could also be noted by looking at Twitter in particular, that Eric, Adam, Lisa, Diana, Gabriel, Rosie, and to a lesser extent, Seth promote their professional self through an ideal image, which Junco refers to as promoting a brand (2014).

Junco also asserted that youth explore identity through social media, and experiment with the presentation of their online selves (2014). At first glance, it would seem that Nick is the only one who seemed to be exploring his identity because of the way he used Twitter to communicate with his friends, but upon closer inspection, Charlotte, who only tweeted, retweeted, and replied specifically to issues ONedSchat can also be seen to be exploring her identity. She described her decision not to create a Twitter profile description and use emojis instead as a direct result of not knowing who she wanted to be on Twitter. The exploration of

identity seemed to occur with the older students who presumably have had exposure to social media and its societal norms for many years before being a part of ONedSchat. Further research comparing the impact of mentorship in younger years versus later adolescence requires further exploration specific to how and why there is a marked difference in student behaviours around online identity.

Students reflected on how their personal opinions were challenged and felt they had widened their perspectives on a variety of topics stating that ONedSchat was “bigger than themselves”. This is consistent with Snyder’s (2016) findings, which link global collaboration and digital citizenship, and revealed that students who engaged in global collaboration via social media became less ethnocentric. This larger scope can also be connected to Westheimer & Kahne’s (2004) definition of the justice-oriented citizen. The orientation towards justice or causes could be seen in the various topics the students selected. ONedSchat students wanted to create questions around the #FridaysForFuture movement climate change, music and mental health, body image, and paying it forward in year two of the chat. Participation of interest-driven online activities through ONedSchat parallels the findings of Kahne, Lee, & Feezell (2013), who reported that interest-driven online activities fosters civic and political engagement, whereas friendship-driven use of social media did not.

## **5.2 Digital Literacies**

As teacher-mentors, we were very proficient in digital literacies: using Twitter, Google Hangouts on Air, Canva, Tweet deck, and YouTube and knowing when to use which platform to communicate fluidly. The findings of this study suggest that students developed a plethora of digital literacies skills that they previously did not possess. Student leads in ONedSchat demonstrated the ability to engage in meaning making mediated by a myriad of modalities, texts,

and social practices which are produced, exchanged digitally which Knobel & Lankshear (2006) express as the definition of digital literacies.

It could be inferred that because we mentored our student leads on how to use Twitter to connect to experts, they recognized the potential of Twitter as a tool, not just for sharing and communicating, but connecting with a broader audience. For example, both Rosie and Gabriel, used their Twitter accounts to reach out to experts, and our guest expert for one of the Twitter chat was contacted by Emily, while Eric and Adam both consistently connected with professionals in their chosen careers. Diana shared the number of technology tools she learned, citing that the skills she learned would help her in the future. Even the student who did not consider herself a leader online because she didn't feel proficient using technology acknowledged that everything she learned about technology and social media was learned because of the ONedSchat. These results are consistent with Deaves et al. (2019), who found that active engagement with social media provided opportunities for graduate students to develop professional networking and communication skills and enhance employability skills which are essential for developing digital literacy capabilities.

ONedSchat closely resembled an affinity space, described by Gee, 2013, characterised as being fluidly engaging with technology for different purposes as needed. Although the entire student team demonstrated this fluidity to some extent, Diana and Seth in particular continued to explore tools which would be of benefit to the growth of ONedSchat. Affinity spaces are also characterized by fluid status of mentor and mentee, which we saw unfold as students felt comfortable leading and learning, mentoring and being mentored.

Jenkins (2007) characterized participatory culture as spaces where there are minimal barriers to civic engagement and expression, where there is an informal mentorship relationship,

where members feel that their contributions matter, and where they feel a degree of social connection and caring for one another (Jenkins, 2007). Students, in their various podcast reflections and sometimes on Twitter, reflected on the fact that they felt that their contributions mattered and that they were a part of something bigger than themselves. Each month, in our Tweet and Talks, students on the team shared their own personal examples and experiences in relation to questions they helped to create.

### **5.3 Student Voice**

The YouTube Live panel was the key vehicle for students to share their voices and perspectives. Each student interviewed on a podcast or in person felt that the experience of sharing their views on topics of their choosing was the most memorable and powerful aspect of being involved in ONedSchat. This reinforces Dana Mitra's (2018) stance that educational contexts can be transformed when students assume agency in initiatives and when their opinions are not just listened to but valued.

Students and teacher-mentors commented that topics and questions were student-created. In a podcast, Rosie shared that student leaders used a "doodle poll" to elicit topics that students would like to vote on to talk about and Charlotte stated that students had complete choice and shared in the various responsibilities. Whenever a student spoke of ONedSchat, it was from a "we" perspective; giving a sense of ownership of the process. Blau & Shamir-Inbal (2017) found positive effects on Masters level students when they functioned as co-designers of course content and became co-creators of their teaching learning experience. So too do the results point that students on the ONedSchat team, as young as grade 7, felt like they were co-creators of their own learning, and took on more and more responsibility because felt they had ownership of the project. These results are consistent with a study conducted by Lindgren & McDaniel (2012)

who reported that increased student agency resulted in greater perceived relevance of course material, critical thinking and design skills.

All the students who shared their perspectives (interview, podcasts, conferences) said they felt confident in using their voices, but it is evident that not all students used Twitter as a way to amplify their voices as much as they did during the live panel discussions on YouTube Live. In fact, the actual interactions on Twitter for the majority of the student team did not match students' thoughts and feelings about the power of their voices. This finding reinforces some studies noting the limitations of using Twitter (Gunuc, Misirli, & Obadasi, 2013; Deaves et al., 2019) and merits further investigation as to the actual reason for the discrepancy. Overall, however, the various narratives support that ONedSschat enhanced student voice in action.

#### **5.4 Digital Leadership**

For the purpose of this paper, student digital leadership was defined as the ability to use technology, especially social media, to model digital citizenship, show flexibility using platforms and tools, develop a keen sense of digital identity, network, create community, and inspire change. All of the students achieved technical proficiency using Dotstorming, Google Hangouts on Air, while 8 out of 10 students demonstrated technical proficiency of Twitter. Technical proficiency of Twitter is one of the qualities of digital leadership identified by Nobora (2014). One student interviewed stated that she did not believe herself to be a digital leader stating, "there is still a lot for me to learn before I could place myself as a leader on the internet". It is evident that this student equates digital leadership as proficiency in using digital tools or technological specialization (Norbona, 2016). Despite this, the student noted that she perceived herself to be a leader during the Tweet and Talk YouTube Live stream panel discussion and as a mentor to other students on the team. She did not go into detail about why that is.

Of note is the fact that the four youngest students moved beyond a procedural use of digital platforms by aptly negotiating the use of Google Hangouts on Air Tweet, using the chat features and referencing comments made on YouTube and Twitter. These students use of Twitter was authentic, as their tweets consisted of sharing ONedSchat information and their own interests. This pattern is consistent with the findings of Gomez and Lee (2015) who advocated an authentic approach in media production by leveraging social media to build skills through a voluntary interest-driven after school program.

Seemiller's leadership competencies (2013) could be seen in the way in which students engaged both on and offline. For example, students in this study demonstrated an awareness that they were impacting a wider audience which could be seen by the fact that they reached out to experts, tweeted inspiring messages, and volunteered to appear on podcasts and present at conferences. These behaviours connect to Seemiller's (2013) personal behaviour and self-awareness and development competencies related to leadership. Student reflections and teacher testimonials indicated that students perceived themselves as agents of change, communicated effectively and mentored and celebrated others on the team (Seemiller, 2013).

### **5.5 Situated Cognition/ Cognitive Apprenticeship**

The Cognitive Apprenticeship framework was reflected in the contextual approach of the ONedSchat and has implications for how social media can be used in school with guided support. ONedSchat student team benefitted from the guidance and mentorship of expert panelists and the adult mentors in areas such as how to create a Twitter account, how to create deep questions, and how experts solve problems as they happen. The resulting learning experience, which allowed students to watch real-life problem solving in action, can be characterized as the modelling stage in the Cognitive Apprenticeship framework (Lave, 1988;

Brown, et. al, 1989; Collins et. al., 1991; Collins, 2015). One of the mentor teachers noted that, in terms of modeling, adult-student, student-student, and adult-adult mentor relationships developed throughout the process. This observation is consistent with Tilly and Callison (2007) claim that with information technology, there is fluidity in who is the learner and who is the teacher.

ONedSchat also effectively demonstrated what scaffolding with cognitive apprenticeship looks like with regards to digital citizenship, digital literacies, and digital leadership skills (Lave, 1988; Brown, et. al, 1989; Collins et. al., 1991; Collins, 2015). This scaffolding could be seen in the various ways we supported students by providing resources and hints to help students develop richer questions that elicit greater discussion. Diana explicitly referenced the impact of scaffolding when she stated in a podcast that one of the things she learned was to create better and richer questions.

We also helped students with Twitter and Google Hangouts on Air before gradually removing supports, which Collins (1991, 2015) calls *fading*. For example, scheduling slow chat questions, creating graphics, and creating questions became more and more student-directed with less adult influence. The fact that one of the students is going to take over as moderator in the next school year also shows that fading is possible, when students are mentored, provided with scaffolds, until they feel confident enough to assume independence.

*Student reflection*, the final component of cognitive apprenticeship (Collins 1991, 2015), occurred both formally (podcasts) and informally (team meetings). Teacher and student interviews as well as the various student perspectives shared publicly in podcasts indicated how much student leads learned and grew as a result of the ONedSchat experience, not just in terms

of understanding how to behave responsibly or use digital tools, but also as communicators and leaders.

## **Chapter 6. Limitations of Study**

While every effort was made to gather high quality rich data collection for this study, there were still at least four limitations to this study. These limitations include scalability, indirect evidence, bias of sample, and transferability. Firstly, with regards to scalability, the sample size was small. The entire student ONedSschat team consisted of eleven members, past and present, with only six current members. Thus, it is difficult to know if similar results would have been observed had the sample size been bigger.

Secondly, this study included some indirect evidence. Because of time constraints, not all the voices of the student team could be brought into this study. Although the voices of these other students were publicly available on podcasts within the ONedSschat hashtag, due to ethical review constraints, I was unable to directly interview the students about digital citizenship and digital literacies. Thus, the student perspective is limited by the fact that there is only one student interview, and that responses by students in podcasts were not specific to the research questions posed in this study.

Thirdly, the results and implications of this study are limited because the students who were invited to become part of the ONedSschat student team were hand-selected based on previously demonstrated leadership skills. It is possible that students in this study may have developed qualities of digital leadership on their own, without the ONedSschat. This bias means that some implications about leadership may be inaccurate. Consequently, in future studies, it would be important to have a control-group of students who would not be characterized as

leaders in their classrooms and/or schools and look at the differences and similarities which surface.

Lastly, it is difficult to know what the transferability of these results to an educational setting might be, primarily because participation would go from voluntary to mandatory. Although there was some evidence that participants in classes benefitted by viewing the ONedSschat Tweet and Talk Live streams and participating via social media, the results are not generalizable. Surveys and additional research about the impact of participation would be worthwhile. In a traditional educational setting, it would also be more difficult to have all of the students' interests included as topics, therefore the results might also be different. The mentorship that existed within the ONedSschat that benefitted team members was multi-aged, which does not occur in traditional classroom settings.

## **Chapter 7. Educational Implications**

Several aspects of our contextual approach to building digital citizenship and digital literacies, as well as promoting student voice, agency, and digital leadership could be implemented in a classroom setting. More specifically, six possible implications for educators include: 1) using situated cognition as a model to use social media in a K-12 educational setting; 2) countering the current fear narrative with positive use of social media; 3) increasing student voice and agency; 4) incorporating YouTube Live and Twitter applications in the classroom; 5) using social media with younger students and 6) creating a more participatory affinity space in traditional classroom settings.

## 7.1 Situated Cognition in a K-12 Educational Setting

While the sample size is small, the results of this study showed that improved digital literacies and digital citizenship using a situated cognition framework can have positive effects. When considering the way in which Cognitive Apprenticeship (Collins, 1991, 2015) works to scaffold and support student learning using social media, it is clear that cognitive apprenticeship can become a framework which is not only successful for literacy and numeracy learning, but teaching and learning using technology and social media as well.

Members of the student team learned new digital platforms in the context of the ONedSchat. Drawing upon situated cognition (Brown, 1989, Collins et al., 1991), learning digital tools and platforms in authentic contexts, could improve digital citizenship and digital literacies skills. Classes who participated in ONedSchat learned how to comment effectively on YouTube, how to use Twitter to read, decode, and express their opinions and ideas in 280 characters, tag members of the team and/or organizations, while ensuring they are maintaining respectful dialogue. In situated cognition (Brown, 1989), the modeling of a technology tool begins as a very teacher-centered approach and then gradually there is a fading (Collins et al., 1991) whereby the student assumes full responsibility for the task or tool. This supports the findings of Mattson (2016) whose comprehensive review of digital citizenship revealed that engaging in the use of social media which takes into account the interplay of technology, communication as well as cultural and societal practices in context rather than programs which were considered in isolation had greater likelihood of being transferred to other aspects of students' lives.

## 7.2 Social Media and Fear Narrative

The results of this study show that rather than a fearful experience, social media can be used in an educational context quite positively. Fear of inappropriate social media use and specifically of cyberbullying is often a barrier to using social media in school (Teague, 2015; Jenkins, Ito, and boyd, 2016; Jenkins, 2017). Jones & Mitchell (2016) advocated that cyberbullying and sexting should be replaced by helping youth practice online social skills. The results of this study show the extent to which students believe social media is not just a place to “mess around with their friends” as pointed out by Rosie, but, when used in the context of teaching and learning, can be a powerful mechanism for authentic and relevant experiences to practice meaning-making and learn digital citizenship (Couros & Hildebrandt, 2015; Gleason & Heath, 2019; Gleason & Gillern, 2018).

## 7.3 Increased Voice and Ownership

Increased student voice in a classroom setting can help students feel greater ownership towards their learning. The results suggest that ONedSchat engaged students beyond collaborators and were equal partners in co-designing their own learning experience (Blau & Shamir-Inbal, 2017). In student reflections students identified ownership for topics and questions created for ONedSchat. They spoke of the topics as ones which were of interest to them and which would be of interest to other students. This sense of ownership was translated into one student suggesting a Twitter bot, two or three students reaching out to other students and/or adults to help them, and many of the students feeling like they could be positive role models to others. This is consistent with Dana Mitra’s (2018) study of secondary students which links student leadership and student agency to educational transformation. The results also point

to the fact that students on the ONedSschat team, as young as grade 7, felt like they were co-creators of their own learning, and took on more and more responsibility because they felt they had ownership of the project.

#### **7.4 Twitter for Communication and Community Building**

Twitter in collaboration with YouTube Live provide an effective combination for communication and learning with other students beyond the classroom walls. Twitter seemed less a platform for communicating and community building than the live panel discussions through YouTube Live. This was evident when one considers that students spoke about ONedSschat in terms of it being a “safe space” and a place of community, asserting how much they enjoyed being a part of the team, but primarily used their Twitter account to tweet or retweet information about the chat. Even the most prolific students in terms of digital literacy skills (created Chat Hack videos, participated in several podcasts and engaged in conference presentation opportunities), did not use Twitter to create community or communicate deeply. Although Gao and Li (2017) found that a one-hour Twitter chat for teacher professional development created a positive community where educators discussed topics and issues to support their learning (2017), the results in this study indicate that a combination of YouTube Live and Twitter is more effective for both learning and community building. These results are consistent with Lao & Herrom (2017) who note that YouTube Live stream can create community especially if comments are read during the event using participants’ names so as to create a connection between viewers and participants, minimizing the digital separation that naturally exists.

## **7.5 Participatory Affinity Space Elements**

The elements of participatory culture and affinity spaces provide many benefits for students and should be incorporated into teaching and learning. Traditional educational settings do not naturally create participatory cultures or affinity spaces. Specifically, students are not in classrooms by choice, neither are they in multi-aged classrooms with people with whom they share a common interest (Gee, 2013). In many cases, in a traditional classroom setting, there is a focus on “knowing” rather than “knowing and doing” (Gee, 2013, p. 175). Adding multi-grade collaboration and moving towards a model where students actively participate in an online chat, for example would be of benefit.

## Chapter 8: Concluding Thoughts and Future Research

It can be concluded, based on student tweets, archived webinars, interviews with two adult mentors and one student team member, as well as podcasts, tweets, and webinars which were publicly available via the #ONedSschat hashtag, that with few exceptions, students involved in ONedSschat for a year or more, exhibited a high degree of digital citizenship, and used tools and platforms with great proficiency. They also exhibited a high degree of leadership because they felt that their voices mattered. Students involved in the project for less than a year, also demonstrated proficiency in digital citizenship and digital literacies. Despite a reluctance to include social media into K-12 educational contexts, it would seem that using a contextual approach has positive benefits.

Further research would be needed to see if an approach like ONedSschat made a positive impact only because students were already leaders in their school communities, or if elements of the chat itself: autonomy and voice, scaffolded digital literacy and citizenship skill-building would also be noticeable if students were not leaders offline.

Also, apart from the testimony of one of the teacher-participants and a few tweets by classes who participated, it would be ideal to engage in an extensive study of the participants of ONedSschat to identify the benefits of the program and the impact it has on student learning. The student team believe they were inspiring role models for other students. Incorporating a large-scale survey type of study might give greater insight as to the modeling which occurred in classrooms, and transferability of the findings.

Ahlquist (2016) recommends that time spent learning about digital identity and fostering leadership skills online should happen prior to students entering college. Further research into the

impact a contextual project like ONedSchat can have on student behaviours in a K-12 educational environment is needed.

Rosie, in a podcast interview, stated the following when asked about her favourite part of being a part of ONedSchat: “I love watching this chat grow from a tiny little baby growing up to a toddler. I feel like it’s hitting childhood age. It’s so wonderful and cool to me” (Daniel, 2019). The growth she has experienced is that which I use the narrative inquiry methodology to see how the story unfolds.

A teacher, and host of the #ONedMentor podcast, spoke about how excited her grade 6 students were to participate in ONedSchat. She shared that students so seldomly recognize the power of using social media in the context of learning. She eloquently expanded upon what she meant by power:

*Power in weighing in.*  
*Power in engagement.*  
*Power in learning from, with, and around each other* (Daniel, 2019).

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