Enriching Civic Learning Experiences in Elementary Social Studies Classrooms to Prepare Students for Purposeful Citizenship

Dissertation

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Abstract

Civic purpose involves both students' attitudinal and behavioral commitments to social causes and is critical for our young generation to flourish as human beings and to withhold a healthy democracy in the current social climate. The purpose of the current study was to investigate the relations among elementary students' social-, moral- self-concepts, civic competencies, and civic purpose in the context of a social studies curriculum. Digital Civic Learning (DCL), where students were immersed into virtual historical/social situations and discussed civic topics collaboratively, served as a learning context for students to demonstrate their civic knowledge, skills, and dispositions. The sample included 149 4th and 5th graders from two school districts in central Ohio. I developed a civic competencies coding scheme to examine students' levels of civic knowledge, skills, and dispositions demonstrated in their DCL participation, including argumentative writing, collaborative discussions, and self-recordings of civic discourse. The findings showed that students' social-, moral-, self-concepts were associated with civic purpose; students' civic competencies (knowledge, skills, dispositions) during DCL did not predict civic purpose and did not mediate the relations between self-concepts and civic purpose. However, students' moral self-concept mediated the association between civic knowledge and civic purpose, as well as between civic skills and civic purpose. The

findings speak to the importance of nourishing early adolescents' moral self-concept in order for their civic competencies to be manifested as a form of civic purpose.

Dedication

I dedicate this work to all the individuals who lived dedicated lives for the sake of others' better living conditions and more humane societal systems. Such lives not only make our society sustainable but also more improved, safe, trusted, and communicable. I hope our growing students will learn and practice the lifestyles of contributing to others' lives possibly in many forms. And I believe that fostering civic purpose in them will be one way.

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Publications

Kim, S., Black, A., Cha, W., & Liu, X. (in press). Applying theories-informed and evidence-based practices in an educational psychology online course: Experience-based suggestions and discussions. *Teaching in Online, Distance, and Non-Traditional Contexts.*

Kim, S., Lin, T.-J., Ha, S.Y., Glassman, M., Cash, T., Wen, Z., & Nagpal, M. (2023). Contributions of knowledge justification with peers to the development of social perspective taking. *Journal of Moral Education.*1-21.

Wen, Z., Lin, T-J., Glassman, M., **Kim, S.,** Tilak, S., Ha, S.Y., & Nagpal, M. (2023). The influence of small group discussions on students' social perspective taking. *The Journal of Early Adolescence. 02724316221149630.*

Kim, S., Lin, T.-J., Chen, J., Logan, J., Purtell, K.M., & Justice L.M. (2020). Influence of teachers' grouping strategies on children's peer social experiences in early elementary classrooms. *Frontiers in Psychology,587170.* https://doi.org/10.3389/fpsyg.2020.587170

Kraatz, E., Nagpal, M., Lin, T. J., Hsieh, M. Y., Ha, S. Y., **Kim, S.,** & Shin, S. (2020). Teacher scaffolding of social and intellectual collaboration in small groups: A comparative case study. *Frontiers in Psychology, 11*, 3007. https://doi.org/10.3389/fpsyg.2020.587058

Kim, S., & Park, S., & Kwon, S. (2019). The moderation effect of social support at volunteering sites on the relation between participation in and attitudes toward volunteering work. *Asian Journal of Education (Korean), 20*(2), 461-489. http://doi.org/10.15753/aje.2019.06.20.2.461

Kim, S., & Lee, H.D. (2018). A literature review and reflection on educational meaning that Christian youths have in doing volunteering works: View from the educational psychological theories, *Faith and Scholarship (Korean), 23*(3), 99-128.https://doi.org/10.30806/fs.23.3.201809.99

Park, S., & **Kim, S**. (2017). The longitudinal relationship between volunteering time, pro-sociality and self-worth in middle school students, *Journal of Future Oriented Youth Society (Korean), 14*(1), 145-168.

Park, S., & **Kim, S**. (2016). Reciprocal effects of social relationships and sense of community in adolescents, *Studies on Korean Youth (Korean), 27*(2), 5-32. http://dx.doi.org/10.14816/sky.2016.27.2.5

Fields of Study

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Chapter 1. Introduction

Civic education ought to be one of the most crucial missions that public schools hold for maintaining the democratic system and healthy functioning of society (Bergen & McLean, 2014). Promoting civic development among students is not only a pressing issue for our societies but also greatly impacts students' psychological well-being (Hart et al., 2014), self-understanding and well-integrated identity (Van Goethem et al., 2012), academic performance (Schmidt et al., 2007), and sense of connection and belonging (Scott & Graham, 2015). Despite ample empirical evidence suggesting the positive impacts and the necessity of civic development, unfortunately, America's civic education is facing a crisis. In 2018, more than 70% of eligible citizens in 18 to 29 years old chose not to vote in the midterm elections (CIRCLE, 2019). National Assessment of Educational Progress reported less than 25% of 8th graders scored at or above proficient levels in civics, geography, and history, the content areas of civic exams (Lee, 2020), showing how poorly students are equipped as citizens in their schooling. National Education Association posits that such failure and the crisis of American civic education lie in schools' heavy focus on rote memorization of facts, with the minimal emphasis on building civic skills and dispositions (Litvinov, 2017).

In order to prepare current students for the competent future citizenry, **early intervention and education in school settings are essential**. Numerous studies have

shown the important roles schools play in students' civic development (Pasek et al., 2008). Though civic development of early adolescents is relatively unexplored due to the main focus of civic education practices and research on late adolescents and adults (Golombek, 2006; Lee et al., 2021), compelling evidence suggests that tweenagers as young as the ages 8~12 can be active social actors and citizens (Astuto & Ruck, 2017; Arthur & Davison, 2000). Following a developmental perspective, tweens have great potentials to grow and learn to become competent citizens because they start developing the capacity to understand others' perspectives (Eisenberg et al., 2005), enact complex reasoning (Parker & Hess, 2001), reflect on social topics critically (Osorio, 2018), and collaborate with peers in an accountable way (Michaels et al., 2008), all of which tap into civic competencies. Furthermore, tweens have shown capacities to cognitively and affectively empathize with others (Scott & Gram, 2015), expand their understanding of the society (Van Goethem et al., 2014; Eisenberg et al., 2005) and belief systems (Smetana & Villalobos 2009), feel connected to communities (Scott & Gram, 2015; White & Mistry, 2016), develop efficacy to make positive change (Scott & Gram, 2015; White, 2021), civically engaged via doing volunteer work (Eccles, 1999), all of which speak to the potentials and roles of tweens as growing citizens. In line with this, The United Nation's Convention of Children's Rights (CRC, UN General Assembly, 1989 as cited in Golombek, 2006) stressed the need to cultivate civic development in tweenagers (Astuto & Ruck, 2017). Therefore, it is important to investigate with which principles younger students can learn to be competent citizens in classrooms. Students' learning experiences in classrooms can translate into the blueprints of how they will be

participating in communities in the future, engaging in collaborative talk with other citizens, and contributing to the collective decision making. Along the same line, capturing and grasping tweens' experiences with well-designed civic learning curriculum will reveal an important facet of their civic growth.

Civic development is **multifaceted,** ranging from civic beliefs and attitudes (e.g., Oosterhoff et al., 2017), civic reasoning or awareness (e.g., Ammon et al., 2002), to civic engagement (e.g., Ekman & Amnå, 2012). In my dissertation study, I examined a largely understudied and yet critical facet of civic development called **civic purpose**. Civic purpose refers to one's intention to contribute to society beyond personal concerns by participating in relevant actions (Malin et al., 2015). Civic purpose is a recently developed construct of civic development, including one's civic intention (i.e., one's evaluations on how civic actions are important to them), civic motivation (i.e., underlying reasons for participating in civic actions), and civic action (i.e., the levels of involvement in civic activities) (Malin et al., 2017). In this sense, civic purpose covers both students' attitudinal and behavioral commitments to social causes and is critical for our young generation to flourish as human beings and to withhold a healthy democracy in the current social climate.

There have been continuous attempts to foster students' civic development in the context of public schools (Milner, 2008), but much needs to be understood about what constitutes impactful civic learning for students to explore, learn, and grow their civic competencies (see Astuto & Ruck, 2017). Numerous scholars and empirical findings suggest a couple of principles that act as catalysts for civic development, such as learning

about current events (Syvertsen et al. 2007) that are controversial (Hess, 2009) in an open classroom climate (McIntosh et al. 2007, Pasek et al. 2008), learning about ways to improve communities (Kahne & Sporte, 2008), participating in service learning projects (Moely & Ilustre, 2013), and engaging in authentic and active activities (Littenberg-Tobias, 2021).

Despite the efforts to understand and examine effectiveness of civic learning principles, studies on early adolescents' learning experiences using well-designed curriculum in class, especially coupled with a variety of digital tools, remain scarce and limited (Andrews-Todd & Forsyth, 2020). With that, the current study examined early adolescents' civic competencies and their relationships with civic purpose under a novel civic learning approach focused on two instructional practices, namely, collaborative social reasoning and immersive learning. Both of these practices were informed by extant studies documenting their theoretical basis and empirical evidence (Alongi et al., 2016; Bhattacharjee et al., 2018; Lin et al., 2022; Tilak et al., 2023). Collaborative dialogue necessitates students' cooperative efforts to respect their peers and reason deeply about socially and morally complex topics, thereby increasing higher-order thinking (Avery et al., 2013), positive social behaviors (Lin et al., 2022), the ability to understand diverse perspectives (Zhang et al., 2016), and argumentative communications (Reznitskaya et al., 2009). Meanwhile, in immersive learning, students are placed into scenarios as witness of the social-historical events to walk a mile in others' shoes, to apply knowledge, and to resolve issues together with peers (Bhattacharjee et al., 2018). Students gain a better understanding of others' past experiences, historical events, and geographically disparate

locations through this simulated and seamless process (see Herrington et al., 2007). In a nutshell, collaborative dialogue with peers empowers students to think, reflect, and discuss in a civically desirable manner, while immersive learning establishes the optimal learning environment for experiential learning that helps students develop their capacity to understand the lives of others.

In promoting early adolescents' civic purpose via an immersive and dialogic civic curriculum for early adolescents, **students' social-moral self-concepts may play important roles**. Recent studies (e.g., Alvis & Metzger, 2020) suggest that civic development can be related to students' moral and social standings. In this sense, I argue that formulating civic purpose cannot be distant from one's social and moral self-concepts and how they perceive their own roles on civic realms. Moral theorists who contend that individuals' identities are linked with the degrees of corresponding acts (e.g., Blasi, 1983) also suggest that social and moral identities can be one of the individual qualities that can paint various patterns of civic purpose for students.

Informed by the previous studies showing the potential and urgent need for elementary students to become active social agents in the society, in this dissertation study I examined how fourth and fifth grade students' experience in a meaningfully designed civic learning curriculum called Digital Civic Learning (DCL), revealed in forms of civic competencies, related to their civic purpose and social and moral self-concepts. Particularly, informed by the existing civics framework by NAEP (National American Educational Progress), I examined how three civic competencies, namely, civic knowledge, skills, and dispositions, observed during the DCL curriculum predict civic

purpose. Findings from my dissertation are expected to unpack early adolescents' civic learning experiences under a designed environment featuring immersive learning and collaborative dialogue and address a much understudied aspect of civic development by identifying the complex relationships between civic competencies (civic knowledge, skills, and dispositions), civic purpose, and social and moral self-concepts.

Chapter 2. Literature Review

Civic Purpose

Civic purpose, suggested by Malin and colleagues (2015), refers to an engaged intention to make positive contributions to communities or the world beyond oneself via participating in civic actions. This concept was initially derived from the concept of life purpose by Damon and his colleagues (2003). Both life purpose and civic purpose are similar in that they refer to individuals' intention and corresponding efforts (e.g., actions) to achieve something meaningful to oneself that can also benefit the lives of others. However, life purpose mainly refers to one's life goals to achieve something meaningful that can make contributions to others' well-being 'in general' whereas civic purpose is confined to one's aspirations, motivations, and behaviors demonstrated specifically in 'civic domains', such as doing volunteer work or being involved in political activities. Previous studies have clearly distinguished between domain-general (i.e., purpose of life) and domain-specific (e.g., civic purpose) purpose (see Malin et al., 2017).

Civic intention, civic motivation, and civic deeds are three components of civic purpose. These three aspects of civic purpose are derived from the life purpose framework (see Malin et al., 2015): (1) future-oriented 'intention' to accomplish something personally meaningful that motivates one to act or engage in relevant activities or behaviors; (2) prosocial or self-transcendent 'motivation' to transform one's life goals into positive effects and contributions made on communities or others' lives; and (3) corresponding 'engagement' on relevant activities, behaviors, or actions that necessitates

one's investment of time, energy, and resources. Similar to the above life purpose framework, civic purpose has three dimensions in the domain of civic activities (Malin et al., 2015; 2017): (1) 'civic intention' refers to individuals' evaluations of the importance of civic activities to oneself (i.e., how one perceives civic activities to be important to themselves); (2) 'civic motivation' concerns the motivation and reasons for one to participate in civic activities (i.e., why one gets involved in civic actions); (3) 'civic action' reflects the levels at which one participates in a series of civic activities (i.e., whether or how much one practices civic actions).

Malin et al. (2015), in their pioneering work on civic purpose, positioned civic purpose as an integrated, theory-driven construct of civic development and engagement that taps into multiple aspects such as civic efficacy, awareness, and attitudes (e.g., Crocetti et al., 2012; Oosterhoff et al., 2017). They examined high school senior students' civic purpose, using self-reported surveys and interviews including civic exemplars along with a follow-up assessment. The findings demonstrated the importance of identity development, beliefs and values on civic actions, as well as the presence of adults or older peers (e.g., teachers, counselors, church group leaders) who brought civic opportunities to their attention. Relatedly, Burrow (2015) noted that not all youth are surrounded by adults who are capable of serving as mentors to introduce them to meaningful civic engagement opportunities. With that, he stressed partnerships with social figures or organizations to promote youth civic purpose lest constrained opportunities should be interpreted as or result in civic apathy. Malin et al. (2017) examined high school students' civic decline after graduation and found that two

dimensions of civic purpose, namely intention and (self-transcendent) motivation, played a role in buffering such decline, highlighting the roles of one's values and beliefs in sustaining civic efforts. Han et al. (2019), using the same data source, revealed that moral identity in high schoolers was significantly associated with formation and maintenance of political purpose, a more specific form of civic purpose bounded in political engagement (rather than community service). Quinn and Bauml (2018) examined the civic profiles (e.g., justice- oriented) of adolescents in 6^{th}-9^{th} grades according to a framework by Westheimer and Kahne (2004), coupled with a civic purpose framework (Malin et al., 2015). They investigated how adolescents' thinking generated during a five-day civics camp unfold differently according to their civic profiles. A recent study by Bauml et al. (2023), using the same data source, revealed important facets and characteristics of civic learning in promoting civic purpose based on the interviews with the participants: adult guides, developmentally appropriate activities, opportunities for diverse and marginalized youth, and action civics curricular principles.

Civic Competencies

According to the National American Educational Progress (NAEP), **civic competencies** are divided into three categories: knowledge, skills, and dispositions. Civic knowledge refers to students' knowledge about principles, purpose, and functions of governmental and political systems (e.g., laws), concepts related to American democracy (e.g., citizenship), and the relations between the United States and other countries (e.g., trade), to name a few (more details can be found in the method section, Table 2). Civic skills involve intellectual skills and participatory skills; the former mainly address one's

abilities to identify, describe, explain, analyze, and evaluate ideas whereas the latter primarily concern interactive skills with others as well as monitoring (e.g., following public issues in the media) and influencing skills (e.g., writing petition) (more details can be found in the method section, Table 3). Civic dispositions are defined as the inclinations or traits essential to pursue the ideals and spirits of democracy (e.g., respectful, thoughtful, critical) (more details can be found in the method section, Table 4).

Civic knowledge and skills are crucial civic competencies for young pupils to develop (Galston, 2004; Hillygus 2005; Zorwick & Wade, 2016). For instance, Cohen and Chaffee (2013) found that civic knowledge (e.g., knowledge about current events, American governance) and self-efficacy for civic skills (e.g., one's perceived ability to persuade people to care about an issue, give a public speech, write an opinion letter) both positively predicted adolescents' future intention to vote, a type of civic actions. Thus, civic knowledge and skills serve as precursors or predictors of civic intention and readiness for civic participation. Zorwick and Wade (2016) also posited civic skills as necessary competencies to make one's civic knowledge meaningful when contributing to their communities. Also, Scheufele (2002) found that news consumption is associated with one's civic participation, suggesting that one's knowledge on current events may provide a good epistemic foundation for students to get involved in civic actions. Civic skills, on the other hand, can broadly include communication skills (e.g., discuss and express), intellectual skills (e.g., explain and analyze), and participatory/organization skills (e.g., organize groups and meetings) (see Brunell, 2013). Civic skills, a set of

abilities such as identifying, describing, and explaining ideas (Zorwick & Wade, 2016), arguing, reasoning, and questioning one's standpoints (Reznitskaya et al., 2009), co-constructing discourse with others (Akar, 2016), building interactions to promote common and personal interests (Patrick, 2000), and listening to others (Kirlin, 2003), all contribute to equipping adolescents with fundamental skill sets for competent citizenry (Rutten & Soetaert, 2013).

In terms of **civic dispositions**, Metzger and his colleagues (2018) argued that empathy is an important component of mature citizenship because the ability to understand others' thoughts and feelings allow students to communicate with others more effectively, which is critical in civic discourse and collective decision making. They found that **empathy** predicted nearly all forms of civic engagement (e.g., voting intentions, volunteering, political beliefs, social responsibility) in adolescents (M_{age} = 13.4). Empirical evidence also suggests that high levels of empathetic responses and concerns for others are associated with a host of positive developmental outcomes, including prosocial and helping behaviors even toward strangers (Findlay et al. 2006; Padilla-Walker & Christensen, 2011). It is possible that people with empathic dispositions or responses are more capable of detecting other people's needs and are more eager to acquire and accumulate information about them, eventually prompting them to help others (Karniol & Shomroni, 1999). This mechanism of becoming more informed about other peoples' situations and enacting appropriate actions is an important aspect of developing desirable citizens who are not ignorant or unaware of other peoples'

viewpoints and being capable of considering diverse perspectives in one's decisions and behaviors.

Critical consciousness, another type of civic dispositions, refers to the ability/inclination to recognize and critique systematic forces that hinder human's full functioning (Freire, 1973). This disposition allows individuals to evaluate and pose problems in society and enable them to see more clearly the oppression that inflicts injustice to certain populations. Critical consciousness is an important developmental asset (see Diemer et al., 2016) especially in terms of children's and adolescents' civic development, showing positive associations with civic behaviors such as expected or actual voting behavior (Diemer & Rapa, 2016). Moreover, the disposition and ability to raise problems of structural inequities and advocate for the egalitarian and fair society by itself is consistent with the conceptualization of citizenship (see Westheimer & Kahne, 2004). Citizens who will act for the betterment of society should base their behavioral decisions on their critical reflection and awareness to discern the elements of injustice (see Ibrahim et al., 2021). Additionally, civic dispositions may include individuals' personal and public character traits such as respect for others and a sense of responsibility (Maryland State Department of Education, n.d. as cited in Zorwick & Wade, 2016).

Social and Moral Self-Concept

Tweenager are able to perform self-evaluative processes and higher-order self-representations (Harter, 2007). Students of this age also demonstrate the ability to suppress egoistic and self-centered desires when confronted with opposing moral desires (Krettenauer, 2013). Recent findings indicate that the process of integrating moral values

and self may begin as early as childhood (Krettenauer et al., 2013), rather than adolescence (cf. Damon, 1996). Thus, early adolescents/tweens as young as 8 to 10 years of age are in a developmentally optimal position to examine their moral and social self-concepts in conjunction with their civic development.

Moral self-concept or moral identity refers to the extent to which individuals regard moral characteristics as central and significant to themselves (Gibbs, 2019; Hardy & Carlo, 2011). A line of research has been conducted to examine the relations between adolescents' moral identities and civic engagement, with the premise that moral identities predict corresponding actions (Hardy & Carlo, 2011). As a result, numerous studies show that students' perceptions of themselves as 'moral' significantly predict their levels of civic participations such as volunteering (Hart & Fegley, 1995), though the findings are mixed (e.g., Pratt et al., 2003). Many scholars now assert that moral self-concepts serve as a source of motivation for moral behaviors, including civic engagement (Flanagan et al., 2015; Matsuba et al., 2007; Porter, 2013). As Aquino and Reed (2002) argue, individuals' self-perceptions as moral beings can play a critical role in triggering the self-regulatory processes that result in moral attitudes and behaviors. It is plausible that moral self-concepts can be a significant predictor of one's development in civic purpose, as many types of civic activities are frequently regarded as prosocial and moral (Metzger et al., 2018).

Additionally, moral identity theory underpins this perspective (see Skarmeas et al., 2020). Understanding one's self in terms of moral qualities can prompt individuals to make moral judgment of behavior, leading the individuals to engage in prosocial

behaviors. This process can then help individuals to achieve self-consistency and congruence (Blasi, 1983; Hardy, 2006). Similarly, Gibbs and his colleagues (Barriga et al., 2001) examined the relation between adolescent's moral self-concepts and antisocial behaviors and discovered that the more moral terms generated in students' self-description, the lower levels of antisocial behaviors that students exhibited. This finding has been replicated by other studies, reinforcing the connections between moral self-concept and social behaviors (e.g., Sengsavang & Krettenauer, 2015). That is, individuals' self-perception generates a strong drive, motivation, or proclivity to align their behavioral choices with their own self-concepts (Aquino et al., 2007).

Social self-concept refers to individuals' self-perceptions of their social acceptance by others and social skills within their social networks (Adeyemi, 2017; Berndt & Burgy, 1996). Similar to moral self-concept, which reflects an individual's understanding of the self as a moral being, social self-concept reflects how an individual views and evaluates oneself as a social being. Such a social self-schema involves students' own perception on their social relationships (e.g., I have a friend) and social characteristics (e.g., shy) (Hart & Damon, 1988). Additionally, social self-concepts represent individuals' assessments on how they act and behave in social situations (Markus & Wurf, 1987).

Students' social self-concept can help explain their engagement in civic learning as well as their varying levels of civic purpose because civic learning and growth necessitate and imply a series of social interactions such as listening to other peers, responding appropriately to conflicting opinions, reaching an agreement, making a

collective decision, and cooperating to work on group tasks. Thus, while few empirical evidence demonstrates significant associations between social self-concepts and civic development, some studies indirectly support this relationship. For example, social self-concepts of children and adolescents were positively correlated with their prosocial (Garaigordobil, 2009, as cited in Inglés et al., 2012) and altruistic behaviors (Garaigordobil, et al., 2003, as cited in Inglés et al., 2012), which then predicted civic actions (Reinders & Youniss, 2006; Sherrod, 2005). Kanacri et al. (2014) also found adolescents' prosocial behaviors mediated the relation between their self-efficacy and civic engagement in later time points, demonstrating the predictability of prosocial behaviors on civic actions.

School as a Social Context for Civic Learning

Recently, there has been an increasing interest in schools' responsibility to prepare students for citizens (Lee et al., 2021). Civic learning opportunities, involving learning about current events and societal problems, participating in classroom discussions of important public topics, learning about civic role models, thinking about the ways to improve community with their service, are found to improve students' civic commitments (see Kahne & Sporte, 2008). As it is shown that schools can play important roles in fostering students' civic skills and purpose (Niemi & Junn, 2005), how to help students engage in effective civic learning should be explored and investigated.

Existing literature on civic learning and development suggests that engaging in **civic reasoning and discourse in the classroom** can promote civic competencies (knowledge, skills, dispositions) and purpose (intention, motivation, action). Dialogic

instructional approaches, including small-group discussions (Kuhn, et al., 2019; Zhang et al., 2016) and whole-class discussions (Michaels et al., 2008), can provide students a social context to critically think about complex issues, share their standpoints, provoke students' deeper thinking skills and perspective taking skill, listen to different and conflicting positions, and generate reasons and evidence (Heberle et al., 2020). According to the social constructivist theory (Vygotsky, 1978), when students interact with peers who are varied in their achievement levels, cognitive functioning, and levels of knowledge, more competent peers can provide new perspectives of thinking to less competent peers (Glade, 2020). In this way, Vygotsky argued that knowledge is distributed across social practices and such guided academic talk can facilitate students' sharing and co-construction of knowledge via active interactions. Some empirical findings, however, suggest that it is not classroom discussions per se that leads to effective civic learning, but the atmosphere of the discussions: open environment. An open classroom learning climate has been found to be a key factor for enhancing students' engagement and learning (McIntosh et al., 2007; Pasek et al., 2008).

Another line of research suggests the need of **active learning or action civics** at school, which can be actualized using instructional practices such as service learning (Eyler et al., 1997; Moely & Ilustre, 2013), discussion of controversial public topics (Hess, 2009), immersive activities using classroom simulations (Kawashima-Ginsberg, 2012; McDevitt & Kiousis, 2006; Tilak et al., 2023) that enable students to learn with hands-on experiences, making their learning processes more authentic (Kolb, 1983). Though these types of action-oriented activities involve a range of philosophical origins

and approaches, they mostly share a common standpoint that learning activities should be student-driven, involving peer interactions and engagement in authentic forms of civic participation (see Littenberg-Tobias, 2021). Action-oriented pedagogy is defined as instructional activities that prompt, encourage, and require students to "do civics and behave as citizens" (Levinson, 2012, p. 224). That is, action-oriented pedagogy stresses the importance of actively involved in and participating as a part of community whereby they experience sense of community, ownership, and agency (see Levine & Kawashima-Ginsberg, 2015). Immersive activities can set the stage to "immerse" students to applicable situations for problem solving and provide a context where students can explore multiple facets of problems, practice civic behaviors, and participate in collaborative activities as (current, future) citizens (Herrington et al., 2007; Lo, 2017).

Context of this Study

The current dissertation study was conducted in the context of a curriculum informed by the abovementioned literature that pointed out the critical roles of immersive learning and collaborative civic reasoning and discourse among peers in class. The Digital Civic Learning (DCL) curriculum (Cha et al., 2023; Lu et al., 2023; Martinez et al., 2022; Tilak et al., 2023) embedded several innovative educational components that are optimal for developing early adolescents' civic purpose.

First, immersive learning principle, coupled with active usages of multiple modalities and learning tools (e.g., Flipgrid), allow for augmenting students' experiences as witnesses to social and historical events and building connections to students' personal experiences. For example, in the history unit about Native Americans' land right,

students grappled with broken treaties and broken promises. Such ecological environments integrated with face-to-face and virtual interactions introduced students to multiple perspectives underlying those historical, cultural, and geographical backgrounds, allowing students to experience others' lives as lived, so called "vivencia" (Glassman & Erdem, 2014, p.213). Curriculum activities were designed to incorporate topics that were personally relevant to students and expose students to different perspectives and opportunities for collaboration (Herrington et al., 2007). One example is how DCL portrayed social problems; students learned the inter-dependent nature of social systems and human interactions and ways they adapted to unexpected (and sometimes traumatic) events (e.g., loss of a job, breaking of a treaty) in ways they could easily connect civic topics and larger problems with their everyday lives.

Second, students' collaborative dialogue within small groups and in whole-class discussions provides opportunities to translate one's own or group reasoning into communicable forms of messaging, such as the form of argumentation or emotional appeals (e.g., Lin et al., 2019), and additionally co-construct their understandings and positions, and explore possibilities of actions. Positing early adolescents as communicative beings (Freire, 1970), knowledge can be continually constructed through collaborative reflection on social issues (Kester, 2009), while increasing their understandings of the world (Robert, 1998). Discussion prompts ask students to consider the best social actions to take that can resolve social issues, individually or collectively, which taps into the notion of *Praxis* (i.e., meaningful action based on reflection) by Freire (1970). Students' social interactions with peers where they exchange their ideas and gain

more knowledge from others, are essential in helping them process reasoning on complex issues and understand diverse perspectives, taking their experiences from the external plane to the internal plane of thinking (Lin et al., 2019; Vygotsky, 1978). Continuous reasoning with peers within active learning communities are expected to teach students how to cooperate to communicate, deliver one's position, respectfully listen to conflicting ideas, which constitute the essentials of civic development.

Taken together, the DCL curriculum immerses students in social-historical contexts in which the social issues occur to help students comprehend the issues. The curriculum also creates an open, dialogic space where students can freely reason about social issues both individually and collectively.

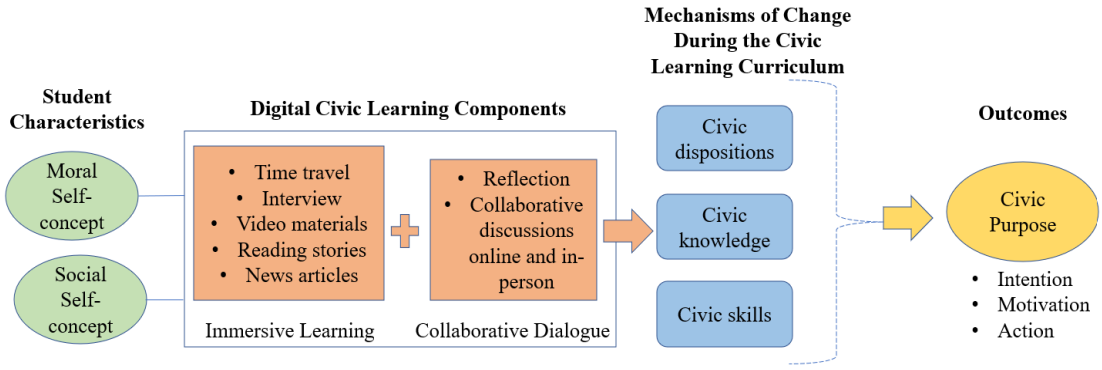

Figure 1. Mechanisms of Change

The overarching hypothesis of this dissertation study is students' experience with immersive learning and collaborative dialogue, revealed in early adolescents' civic competencies (civic dispositions, civic knowledge, and civic skills), would predict students' personal motivation and intention to engage in civic actions (i.e., civic purpose).

The level of students' civic competencies might mediate the relationships between individuals' social and moral self-concepts and civic purpose. To this end, three research questions are addressed as follows.

Research Question 1: Are students' social and moral self-concepts associated with their civic purpose?

Research Question 2: Do civic knowledge, skills, and dispositions predict changes in students' civic purpose after controlling for their social and moral self-concepts?

Research Question 3: Do civic knowledge, skills, and dispositions mediate the association between students' social and moral self-concepts and civic purpose controlling for the civic purpose at the pre-test?

Chapter 3. Method

Study Context

In this dissertation study, I investigated how civic knowledge, skills, and dispositions that are identified through immersive and dialogue intensive DCL curriculum are associated with elementary students' social and moral self-concepts and civic purpose. This study was built upon an ongoing four-year research project designed to develop a social studies curriculum to promote students' interpersonal competencies and academic achievement. Our preliminary findings have supported the feasibility and usability of the Digital Civic Learning (DCL) (Martinez et al., 2022). The current study was based on the Year-2 data collected from eight 4th and 5th grade classrooms located in two school districts in central Ohio. The demographic distribution of one school district (A) is 27.7 % White, 38.5% Black, 8.8% Hispanic, 15% Asian or Pacific islander, and 9.9% multi-racial. About 44% of students were identified as students with socioeconomic disadvantages. In the other school district (B), 67.3% of students were White, 4.9% Black, 4.6% Hispanic, 16.7% Asian or Pacific islander, and 6.3% multi-racial. About 6.4% of students were identified as students with socioeconomic disadvantages.

Sample of the Study

Participants were 149 4th and 5th graders from six schools in the two districts and eight teachers (four in the 4th grade, four in the 5th grade). In this sample, 61.3% were White, 16.7% Black, 5.6% Hispanic, 12.7% Asian, and 3.7% multi-racial and others.

About 47.6% of students were female, and 9.3% students were English learners. Based on the district-provided data, about 14.1% of students received free and reduced lunch. There were more students from School District B than School District A because the consent rate was lower in District B (92.5% from 5 classrooms) than in District A (65.6% from 3 classrooms).

Table 1. Participants by school districts and grades

	4th grade	5th grade	Total
Olentangy District	46	65	111
Reynoldsburg District	29	9	38
Total	75	74	149

Eight teachers received training to deliver the DCL project with the research team. Among these teachers, 100% were White, 12.5% were male, and the years of teaching ranged from 13 to 26 years.

Teacher Workshop

Teachers participated in a four-week online synchronous and asynchronous teacher workshop to learn about how to implement the DCL curriculum in their social studies classes. In this teacher workshop, teachers were introduced to the overall purpose and timelines of the study, key principles of the DCL activities and instructional approaches, the assessment plan, and a summary of curriculum materials. The instructional approaches centered on strategies to foster productive dialogue, collaboration, and culturally responsive practices when introducing complex social issues that were relevant

to students' personal life. The workshop was held in the beginning weeks of the academic year. The research team met with teachers online once a week and introduced an extended dialogue about instructional practices on a social media platform throughout the four-week timeframe. After the workshop, the teachers were asked to report how they found the workshop useful. The averaged rating was 4.48 (*SD* = 0.53), suggesting the workshop was helpful for teachers to prepare for the DCL implementation.

The DCL Curriculum

The curriculum contained four units, each of which lasted for 10 school days. Students learned two units of DCL in Fall 2021 (October to November) and the other two units in Spring 2022(January to March). For the purpose of this study, only data collected from the two units in Spring 2022 were analyzed. The DCL curriculum contains several innovative components: immersive learning (e.g., living with a Native American tribe, living in a neighborhood with limited food options), collaborative small group discussions in face-to-face and online formats (e.g., Web 2.0 technologies, discussion boards, self-recording), and argumentative writing tasks (e.g., reflective essays) (see Figure 2 for the curricular design). During each unit, students were immersed into a particular cultural and historical context to learn about and experience complex civic issues. Students spent two days per unit (DAY 3, 9) to discuss with small groups of peers face-to-face and online about important social issues raised from the assigned readings. Each day of lessons started with reviewing the previous day's highlights, which helped students reflect on what they had learned to connect it to the new lesson of the day. When

sharing their ideas online, students were allowed to choose between making a self-recording video (hereafter called Flipgrid) or sharing their responses on the discussion board.

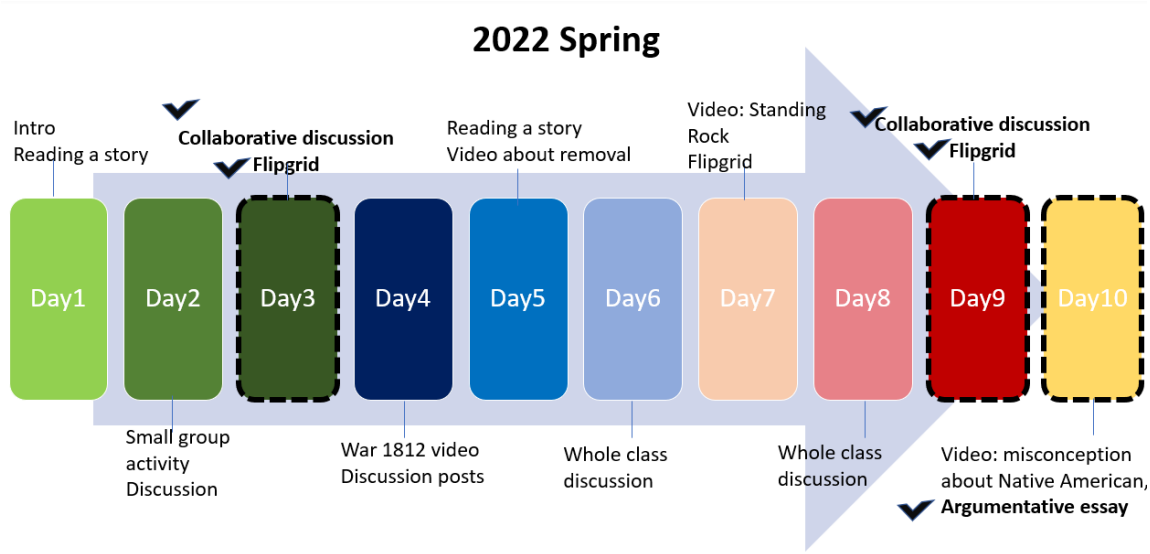

Figure 2. Curricular Design of a Digital Civic Learning Unit

In Unit 3 (History Unit), students learned about important events that impacted different Native American Nations in Ohio and the U.S. (e.g., The war of 1812, The Keystone XL and Dakota access pipelines). The immersive learning activity involved time warp (traveling back to 1800s in Ohio), cookbook activities (preparing a meal), role-plays (helping Native American families), and group poster work (creating signs for the protest), and so forth. On Day 3, students discussed what was the best decision for the leaders of Native Americans (e.g., Tecumseh, Osceola) between signing on a treaty or standing up against the request. Examples of discussion prompts on Day 3 and Day 9

were *"General Thompson wanted the Seminole to agree to the treaty to keep the peace. Osceola felt that accepting the treaty would betray his people but if he agreed to the treaty, he could avoid war. What do you think Osceola should do and why?"* (see Appendix A).

In Unit 4 (Economy Unit), students learned about the role of food in people's lives and how the environment (e.g., food desert, community garden) they live in makes a difference in their food options. The immersive learning activity included exploring Jeannie's neighborhood as an avatar (identifying resources), planning a family's eat-out (basic calculations), and purchasing an item at a community-supported cafeteria (partnerships between community organizations, business, and government). Examples of discussion prompts on Day 3 and Day 9 are *"Many neighborhoods do not have enough grocery stores, but grocery stores do not open in these areas because they think they will not make enough profit to stay open. If you were running a grocery store, what would you consider to be more important: your responsibility to meet the needs of community members or your responsibility to make profit so you can continue to run your store? How can businesses like grocery stores support the community and make a profit too?"* (see Appendix A).

Curriculum Fidelity

Teachers' instruction was observed on each day during the units to ensure the core elements of the curriculum such as immersive learning and collaborative discussion were implemented with fidelity. Research assistants filled out a fidelity checklist developed by

the research team. Based on the fidelity calculations for Unit 3 and 4 for every classroom, the DCL curriculum was implemented with high fidelity, ranging from 90.89%~ 100%.

Study Design

For this study, students completed a battery of assessments on their social and moral self-concepts and civic purpose before the third unit and after the fourth unit of the curriculum in Spring 2022. Students' civic knowledge, skills, and dispositions arising from immersive learning and civic reasoning during the DCL curriculum were coded based on three sources of data: [1] weekly online discussion boards on Day 9, [2] individual argumentative essays on Day 10, and [3] students' Flipgrid videos on Day 9 of the two units. I chose to analyze these sources of data because they served as summative assessments for each unit.

Coding Civic Competencies

The three sources of data –online discussions, individual writings, and self-recording videos– were coded for civic knowledge, skills, and dispositions, using the Civics Assessment Framework informed by NAEP (National Assessment of Educational Progress) (NAEP, 2018, as cited in Lee et al., 2021). This framework was chosen as it covered different aspects of essential civic competencies that the civic development literature suggests, such as knowledge, values, and skills (Galston, 2007; Hamilton & Kaufman, 2022; Metzger et al., 2018; Zaff et al., 2010), and it broadly included both cognitive and affective components of civic competencies. The NAEP civics framework was developed by the National Assessment Governing Board and implemented as a nation-wide assessment to provide a blueprint of students' achievement and learning

states in the civic domain (National Center for Education Statistics, n.d.). Using the nationally utilized framework that informs students' civic competencies, I created a coding scheme to capture elementary students' civic competencies revealed in their discourse and writing under authentic classroom contexts.

According to the NAEP Civics Framework, the specifications of each competency, knowledge, skills, and dispositions, are as follows. In this study, **civic knowledge** referred to content knowledge pertaining to the history of Native Americans and economy knowledge associated with food insecurity. I came up with and applied the 'knowledge' component to understand students' learning during the history and economy units in Spring 2022. Central questions listed in the table represent the types of questions in the NAEP civics assessments and the right column contains the contents or concepts assessed by each question. Based on these concepts and topics, I developed subcodes of civic knowledge in the coding scheme (see Appendix B).

Table 2. Civic Knowledge according to NAEP Civics Framework

Central question	Examples of concepts and topics
What are civic life, politics, and government?	Necessity, purposes of government Importance of rules, laws
What are the foundations of the American political system?	American identity (national identity) Costs and benefits of unity and diversity
How does the government established by the Constitution embody the purpose, values, and principles of American democracy?	Major responsibilities and services of state/local governments

What is the relationship of the United States to other nations and to world affairs?	Nation, Interaction among nations (trade, cultures)
What are the roles of citizens in American democracy?	Meaning of citizenship, process of becoming a citizen, civic responsibility, opportunities for civic participation

Civic skills can be largely categorized into two subsets: intellectual skills and participatory skills. Based on NAEP, intellectual skills encompassed students' skills to (a) identify and describe concepts, (b) explain and analyze thoughts, and (c) evaluate, take, and defend positions (i.e., argumentative skills), all of which tap into one's cognitive process. Participatory skills were more related to interpersonal or social skills such as (a) interacting (e.g., cooperation), (b) monitoring (e.g., tracking how the politic and societal issues are handled), and (c) influencing (e.g., voting in a student organization). While civic knowledge pertains to 'knowing' essential concepts and principles, civic skills are understood as "applying civic knowledge to good effect" (National Center for Education Statistics, n.d.). The specific descriptions and examples suggested by the NAEP Civics Framework are in Table 3. Out of three categories of participatory skills, I mainly focused on 'interacting' component considering that the other two categories are less likely to be captured under a classroom learning context.

Table 3. Civic Skills according to NAEP Civics Framework

Intellectual Skills	**Examples of skills**
Identifying and Describing	Defining key terms (e.g., government); Making distinctions; Identifying individuals, symbols, and institutions (e.g., civic and political leaders); Identifying ideas and concepts (e.g., minority, majority); Describing functions and processes (e.g., policy formation process); Describing historical origins (e.g.,

	national holiday); Describing/classifying attributes or characteristics (e.g., democracy)
Explaining and Analyzing	Explaining the causes and effects of events and phenomena; Comparing and contrasting (e.g., democracy vs. totalitarianism); Distinguishing between opinion and fact; Interpreting the meaning or significance of events, ideas, and phenomena (e.g., impact of immigration)
Evaluating, Taking, and Defending Positions (i.e., Argumentative skills)	Challenging illogical arguments; Evaluating the validity of arguments, analogies, and data (e.g., logical cohesion); Citing evidence in support or rejection; Predicting probable consequences (e.g., degrees of probability); Evaluating means and ends; Choosing a position from existing alternatives; Defending a position; Responding to opposing arguments
Participatory Skills	**Examples of skills**
Interacting	Working in small groups and committees (e.g., exchanging opinions); Listening; Questioning (e.g., clarifying information or points of view); Discussing in a knowledgeable, responsible, and respectful way; Managing conflicts; Using media resources
Monitoring	Following public issues in the media; Researching public issues; Gathering and analyzing information;
Influencing	Voting in class or student body; Writing petition; Speaking and testifying before public bodies

Third, **civic dispositions** referred to the characteristics or traits (e.g., critical consciousness, empathy) that were essential in upholding the spirit and the system of democracy and contributing to the sense of human worth and common good.

Table 4. Civic Dispositions according to NAEP Civics Framework

Dispositions	Examples on how dispositions can be illustrated
Respecting individual worth and human dignity	Treating everyone with respect; Listening to the opinions of others; Considering the rights and interests of others; Adhering to the principle of majority rule; Respecting the right of the minority to dissent (e.g., empathy)

Participating in civic affairs in an informed, thoughtful, and effective manner	Engaging in civic discourse; Assuming leadership when appropriate; Evaluating and weighing one's personal desires and interests for the sake of public good
Promoting the healthy functioning of American constitutional democracy	Being informed and attentive to public issues (e.g., epistemologically complex and careful); Working through peaceful means (e.g., emotional regulation)

Informed by the abovementioned principles suggested by the NAEP Civics Framework, I modified each subcategory using a data-driven approach to capture students' civic competencies in the context of the DCL curriculum. Specific examples of how I coded students' individual writing, group discourse, and self-recording via Flipgrid are demonstrated in Appendix B. I used content analysis (Kondracki et al., 2002) to identify common themes within the three categories: civic knowledge (e.g., history, geography), civic skills (e.g., argument strategies), and civic dispositions (e.g., empathy). Data obtained from students' individual writing, self-recording, and online group discussions were segmented by sentence unit. Each sentence, the unit of analysis, was simultaneously coded for three aspects of civic competencies, according to the newly developed multi-dimensional coding scheme (Appendix B). To check for inter-rater reliability, I coded all the data first and let the second coder independently work on 20% of each of the data sources (e.g., 20% of Flipgrid data for Unit 3, Unit 4, respectively and same for online discussion boards and individual writing). Inter-coder reliability was satisfactory (Cohen's K= .826 for civic knowledge, Cohen's K =.873 for civic skills, and Cohen's K = .996 for civic dispositions). The levels of students' civic knowledge, skills, and dispositions were calculated based on how many applicable subcodes of civic

knowledge, skills, or dispositions appeared in the data, following the primary coder's final codes.

Measures

Social Self-Concept

Social self-concept was measured using a Self-Perception Profile for Children (SPPC) scale (Harter, 1985). This measure was developed to acknowledge and consider that children develop and possess domain-specific nature of self-concepts and self-understandings: social, athletic, physical, behavioral, and scholastic. Accordingly, SPPC contains these five subscales. SPPC is age-appropriate for the current study's participants in that it is for children and tweens who are aged 8 and older. This measure has been used and adapted widely to assess children's self-concepts (Gacek et al., 2014). The current study adopted one subscale called social acceptance as it relates to students' self-perceptions of themselves regarding their ability to manage social interactions and their social life. Six items of social acceptance showed a good internal consistency (α =.71~.86) and a good test-retest reliability (r= .82) in previous studies (e.g., Gacek et al., 2014; Granleese & Joseph, 1994). I modified these items so that students could rate their own social acceptance ability using a 5-point Likert scale (0 not at all like me – 4 very much like me; e.g., "I have many close classmates"). Internal consistency demonstrated good reliabilities (α= .790 for T1, α= .726 for T2) (see Appendix C).

Moral Self-Concept

Moral self-concept was measured using a Moral Self-Relevance Measure (MSR; Patrick & Gibbs, 2012). The MSR questionnaire, which was modeled after the Good-Self

Assessment, (GSA; Barriga et al., 2001; also see Aquino & Reed, 2002) comprises two sections. In the first section, both moral qualities (e.g., considerate, honest) and non-moral qualities (e.g., funny, outgoing) were presented, each with 8 items. To help participants clearly understand the items, each questionnaire contained two synonyms (e.g., "How important is it to you that you are *generous* or *giving*?"). Participants responded to each question based on the 5-point Likert scale (0 not important – 4 extremely important). The non-moral items were included to mask the purpose of this measure. The second section (called Pick 8) where students choose 8 out of 32 possible qualities that they consider most important to themselves, was not used in this study. MSR showed a good internal consistency for the moral terms (α =.83~.90) (Patrick & Gibbs, 2012; 2016; Patrick et al., 2018). In the current dissertation study, the internal consistency of the moral self-concept measure showed satisfactory reliabilities (α= .813 for T1, α= .852 for T2) (see Appendix C).

Civic Purpose

Civic purpose was assessed with three subscales, intention, motivation, and action, informed by Malin et al. (2017). First, the *civic intention* subscale, which refers to the evaluations of how students perceive participating in civic activities as meaningful in their lives, was assessed by a scale adapted from Malin et al.'s (2017). This subscale has shown good reliabilities in previous studies (α =. 77 ~ .81) (Malin et al., 2015; 2017). Students rated how each of the civic activities was important and meaningful to their lives (5 items; e.g., "making a difference through volunteering") based on 5-point Likert scale (not at all meaningful – extremely meaningful). Considering the participants'

developmental stage, minor wording modifications were made, keeping the original meanings consistent. For example, “being involved in politics” was modified as “participating in political activities like voting, campaign, or protests” to enhance participants’ understanding of the items. Reliabilities for *civic intention* subscale were as follows: α= .768 for T1 and α= .807 for T2.

Second, the *civic motivation* subscale taps into the underlying reasons for participating in civic activities. It was developed by Malin et al. (2017) based on Ballard’s (2015) qualitative study on adolescents’ civic engagement motivation. Based on the emerged themes from a semi-structured interview data, Malin et al. developed 12 items that fell under either ‘self-oriented’ (e.g., “to meet school’s requirement”) or ‘beyond-the self’ (e.g., “to give back what I have been given”) motivations. In Malin et al. (2017), students ranked their top three important motivations for their civic participation. In my dissertation, instead of employing the ranking method, I provided 5-point Likert scale items so that each student has the average score for each type of motivation. I shortened the original 12-item scale into an 8-item scale, 4 items for self-oriented reasons and 4 items for beyond-the self-oriented reasons, to reduce students’ fatigue during the assessment. Only beyond-the-self oriented subscale was used to make the scale aligned with conceptualization of civic purpose. The reliabilities were as follows: α= .676 for T1 and α= .753 for T2.

Third, the *civic action* subscale reflects the levels at which students engaged in a series of civic behaviors. Civic action was assessed by a scale adapted from Pancer et al.’s (2007) Youth Inventory of Involvement measure. It comprises four different types of

activities: political activities, expressive activities, passive involvement, and helping activities with a total of 22 items. Malin et al. (2015) confirmed only three distinct factor structures (traditional and leadership-oriented political activity, expressive activity, and community service), each showing good reliabilities (α = .70 ~ .83). (Malin et al., 2015; 2017). I shortened the original 15-item scale into a 6-item scale and modified the items to make the wordings more accessible to fourth and fifth grade students. For example, "giving money to a cause" was re-worded as "donating money or other things (e.g., food, clothes) to people who are in need." These items were assessed on 5-point Likert scale. Reliabilities for *civic action* subscale were as follows: α= .716 for T1 and α= .675 for T2. The overall internal consistency of civic purpose, combining three subscales, showed satisfactory reliabilities (α=.808 for T1, α= .851 for T2) (see Appendix C).

In most cases, students' reports showed greater internal reliabilities in the post-test than the pre-test, suggesting students' increased capacity to conceptualize and evaluate their internal self-concepts and civic purpose more reliably at a later time point.

Data Analysis Approach

To address **Research Question 1,** examining the relations between students' self-concepts (social, moral) and civic purpose, I conducted regression analysis using SAS Proc Mixed functions. I tested the relationships between students' self-concepts and civic purpose at the pre-test and the post-test. Students' gender, race, grade, school district, and family resource were used as the covariates. To address **Research Question 2,** investigating the predictability of civic competencies (i.e., knowledge, skills,

dispositions) on the civic purpose at the post-test, I conducted regression analysis using SAS. Aforementioned covariates as well as students' self-concepts (social, moral) and civic purpose at the pre-test were included as covariates. The variances of outcome variables were allowed to vary by classrooms using the Repeated Measures function in Proc Mixed to control for classroom differences.

For Research Question 1, I hypothesized that higher social and moral self-concepts would be associated with higher civic purpose at both pre-test and post-test. Regarding Research Question 2, I hypothesized that civic competencies would be significantly and positively associated with civic purpose at the post-test controlling for self-concepts and civic purpose at the pre-test. That is, students who demonstrated greater civic knowledge, skills, and dispositions during the DCL learning show greater civic purpose at the post-test after controlling for the pre-test.

To address **Research Question 3,** investigating mediating roles of the three types of civic competencies in the relation between students' self-concepts (social, moral) and civic purpose, I conducted mediation analyses using Mplus, controlling for the aforementioned covariates. I hypothesized that students' civic competencies (knowledge, skills, dispositions) would significantly mediate the associations between students' social/moral self-concepts and civic purpose.

Chapter 4. Results

Descriptive Statistics

The means and standard deviations of focal variables can be found in Table 5-7. All the self-reported focal variables are presented in Table 5. The variables fell under an acceptable range of skewness (<|2|) and kurtosis (<|7|) (Bryne, 2010; Hair et al., 2010) and were normally distributed. Descriptive statistics for civic competence variables derived from the civic competencies coding scheme are presented in Table 6 (based on the full sample) and Table 7 (by unit and by modality). In each unit, students participated in an essay task as a required activity and engaged in discussion boards or/and Flipgrid by their own choice. The sample size therefore varies by modality. On average, a student generated 7.56 (*SD* = 4.83) sentences under a modality each time (essay, Flipgrid, or discussion board). Out of the three civic competence variables, students generated more civic skills than civic knowledge, which was greater than civic disposition throughout the current study (see Table 5). This same pattern was identified within each modality (civic skills > knowledge > dispositions). Across the two units and three modalities, students generated the most civic knowledge, civic skills, and civic dispositions during the Unit4 essay task (see Table 7).

Table 5. Descriptive Statistics of Self-report Measures (*N* = 149)

	N	Mean (SD)	Skewness	Kurtosis	Range (Min – Max)
T1 Social self-concept	143	3.43 (0.79)	-0.261	-0.244	1.00 5.00

T1 Moral self-concept	143	4.14	(0.60)	-0.291	-0.528	2.67	5.00
Intention	143	4.01	(0.64)	-0.953	1.799	1.20	5.00
Motive	143	4.29	(0.48)	-0.407	-0.296	3.00	5.00
Action	143	2.39	(0.75)	0.288	-0.716	1.00	4.00
T2 Social self-concept	145	3.60	(0.75)	-0.389	-0.162	1.20	5.00
T2 Moral self-concept	145	4.22	(0.66)	-0.619	-0.339	2.17	5.00
Intention	145	4.02	(0.72)	-0.879	1.115	1.20	5.00
Motive	145	4.35	(0.54)	-0.928	2.184	1.80	5.00
Action	145	2.58	(0.74)	0.069	-0.744	1.00	4.00

Note. The values are composite scores based on 5 Likert scales except civic action (4 Likert scale).

Table 6. Descriptive Statistics of Civic Competencies ($N = 149$)

	N	Mean (SD)	Skewness	Kurtosis	Range (Min – Max)	
Civic Knowledge	148	2.02 (1.95)	2.342	6.785	0	11
Civic Skills	148	6.59 (4.00)	1.278	1.890	0	21.5
Civic Dispositions	148	1.41 (1.21)	1.349	2.112	0	6
Total Length	148	7.56 (4.83)	1.448	2.150	1	27

Note. Civic knowledge, civic skills, and civic dispositions are measured by the average number of sentences containing the corresponding civic competence. Total length is the number of sentences (i.e., the unit of analysis) that students generated in each task under a specific modality (essay, Flipgrid, discussion board).

Table 7. Means and Standard Deviations of Civic Competencies by Units and Modalities (N=149)

	Unit3 (History)			Unit4 (Economy)		
	Discussion	Essay	Flipgrid	Discussion	Essay	Flipgrid
	M (SD)			*M* (SD)		
	(*N*=118)	(*N*=112)	(*N*=70)	(*N*=97)	(*N*=114)	(*N*=79)
Knowledge	2.15(2.71)	2.04(3.03)	1.86(2.63)	1.02(1.41)	2.76(3.06)	2.37(2.70)
Skills	5.59(3.83)	7.64(6.61)	6.37(5.74)	4.92(3.86)	9.02(5.96)	5.63(4.13)
Dispositions	1.25(1.62)	1.37(1.92)	1.14(1.81)	1.78(1.95)	1.70(2.12)	0.99(1.31)
Total Length	5.92(4.17)	8.28(7.17)	8.83(8.72)	5.08(3.86)	9.62(6.49)	7.99(6.01)

Note. Total length is the number of sentences (i.e., the unit of analysis) that students generated in each task (discussion board, essay, Flipgrid).

Repeated measures ANOVAs showed that civic knowledge, civic skills, and civic dispositions did not differ by units (see Table 8). Students' civic competencies, however, were significantly different across modalities (civic knowledge: Wilks' $\lambda = .807$, $F\ (2, 54) = 6.468$, $p = 0.003$; civic skills: Wilks' $\lambda = .527$, $F\ (2, 54) = 24.318$, $p < 0.001$; civic dispositions: Wilks' $\lambda = .854$, $F\ (2, 54) = 4.621$, $p = 0.014$) (see Table 9). Pairwise comparisons indicated that students generated more civic knowledge in essays (M=2.93, SD=3.08) than on the discussion board (M=1.60, SD=2.25) ($p < .01$) or Flipgrid (M=2.03, SD=2.51) ($p<.05$). Civic knowledge did not differ between the discussion board and Flipgrid (p=.824). Students demonstrated more civic skills in essays (M=9.19, SD=6.47) than on the discussion board (M= 4.00, SD= 2.85) ($p<.001$) or Flipgrid (M=5.37, SD=4.18) ($p<.001$). No difference of civic skills levels was detected between discussion board and Flipgrid (p=.093). Likewise, students showed civic dispositions more in essay (M=1.71, SD=2.09) than on the discussion board (M= .90, SD=1.25) ($p<.05$) or Flipgrid (M=0.93, SD=1.10) ($p<.05$). No difference of civic dispositions levels was found between discussion board and Flipgrid (p=1.000).

Table 8. Repeated Measures Analysis of Variance (RM-ANOVA) Comparing Civic Competencies by Units

	Mean (SD)		*SS*	*df*	*MS*	*F*	P-value
	Unit3	Unit4					
Knowledge	2.05 (2.29)	2.10 (2.21)	.160	1	.160	.074	.786
Skills	6.64 (4.67)	6.80 (4.12)	1.175	1	1.715	.306	.581
Dispositions	1.31 (1.47)	1.58 (1.58)	5.014	1	5.014	3.361	.069

Table 9. Repeated Measures Analysis of Variance (RM-ANOVA) Comparing Civic Competencies by Modalities

	Mean (SD)			*SS*	*df*	*MS*	*F*	P-value
	Discussion Board	Essay	Flipgrid					
Knowledge	1.60 (2.25)	2.93 (3.08)	2.03 (2.51)	51.65	2	25.82	6.57	0.002
Skills	4.00 (2.85)	9.19 (6.47)	5.37 (4.18)	809.75	2	404.88	27.66	0.000
Dispositions	0.90 (1.25)	1.71 (2.09)	0.93 (1.10)	23.86	2	11.93	5.87	0.004

Table 10 presents the means and standard deviations of each subcode of civic competencies. Across the two units, a student on average generated a total of 29.97 sentences in their individual essay, Flipgrid, and online discussion boards. Each sentence was coded for three aspects of civic competencies: civic knowledge, skills, and dispositions. For instance, if a certain sentence involved valid civic knowledge and skill, but not disposition, the sentence received the subcode for civic knowledge (e.g., civil society) and skills (e.g., positioning) but was coded as NA (Non Applicable) for civic disposition. Students received more NA codes for knowledge (*M*=21.82, *SD*=15.139) and dispositions (*M*=24.43, *SD*=18.276) than for skills (*M*=3.71, *SD*=5.364); in other words, only 18.49~ 27.19% of sentences were considered for subcodes in civic dispositions and knowledge, respectively, while 87.62% of sentences received valid civic skills. *Social issues* (*M*= 2.31, *SD*= 2.655) and *economy* (*M*= 2.31, *SD*= 3.177) were the most dominant codes for civic knowledge. For civic skills, *elaboration* appeared most frequently (*M*= 8.50, *SD*= 7.958), followed by *positioning* (*M*= 5.87, *SD*= 4.625) and *justification* (*M*=5.16, *SD*=3.735). As for civic disposition, *social perspective taking* stood out (*M*= 2.24, *SD*= 2.487) among other subcodes of civic disposition.

Table 10. Means and Standard Deviations of Subcodes of Civic Competencies

	%	*Mean*	*SD*	Range	
				Min	Max
Civic Knowledge					
Civil Society	3.04	0.91	2.00	0	15
Economy	7.74	2.32	3.18	0	19
Knowledge about nutrition	1.74	0.52	1.47	0	9
Knowledge about geography	0.17	0.05	0.25	0	2
International Affairs	0.60	0.18	0.49	0	2
Political and Government System	2.37	0.71	1.34	0	9
Social Historical Event	3.84	1.15	2.29	0	14
Social Issues	7.71	2.31	2.66	0	12
NA	72.81	21.82	15.14	1	76
Civic Skills					
Positioning	19.59	5.87	4.63	0	21
Justification	17.22	5.16	3.74	0	25
Causal Reasoning	4.04	1.21	1.58	0	7
Clarification	1.20	0.36	0.76	0	4
Praise	5.41	1.62	2.44	0	19
Counterargument	2.47	0.74	1.55	0	10
Dis/Agreement	2.54	0.76	1.31	0	7
Elaboration	28.36	8.50	7.96	0	41
Expanding	3.74	1.12	1.37	0	5
Hypothetical Reasoning	2.57	0.77	1.13	0	5
Referencing	0.50	0.15	0.40	0	2
NA	12.38	3.71	5.36	0	29

Civic Dispositions					
Critical consciousness	1.00	0.30	0.72	0	4
Empathy	1.53	0.46	0.86	0	4
Social perspective taking	7.47	2.24	2.49	0	12
Respect	1.57	0.47	0.83	0	4
Responsibility	3.17	0.95	1.57	0	8
Self-transcendence	2.84	0.85	1.35	0	7
Social Capital	0.90	0.27	0.62	0	3
NA	81.51	24.43	18.28	1	90

Note. The values indicate the number of sentences containing civic knowledge, skills, and dispositions generated by students for Unit3 and Unit4, in total. For instance, students showed civic knowledge about economy in 2.32 sentences over the units, including all modalities (discussion board, essay writing, self-recording).

Missing data analysis was conducted to identify patterns of missing. Little's MCAR test using SPSS software indicated that the focal variables and covariates used in the analyses were missing completely at random (p=.443). Therefore, analyses based on the listwise methods for research questions 1 and 2 did not bias the results. Analyses using Mplus were conducted using full information maximum likelihood (FIML) strategy for research question 3 and the alternative analysis. The correlations between the aforementioned variables are presented in Table 11. Students' moral/social self-concepts at pre-test and post-test were moderately correlated and this pattern of correlation was similar for civic purpose (r=.442~.662). The correlations among three indices of civic competencies, knowledge, skills, and dispositions were moderate to high (r= .590~.801). These civic competencies were significantly correlated with students' moral self-concept

at both time points (r=.190~.239) but were not correlated with social self-concepts and civic purpose at both time points.

Table 11. Correlations among Self-Concepts, Civic Purpose, and Civic Competencies.

	1	2	3	4	5	6	7	8	9
1. T1 Social SC	1								
2. T1 Moral SC	**.365**	1							
3. T1 CP	**.328**	**.616**	1						
4. Knowledge	.038	.202	.056	1					
5. Skills	-.009	**.233**	.068	.801	1				
6. Dispositions	-.063	**.239**	.042	.590	.702	1			
7. T2 Social SC	**.662**	**.224**	.211	.056	.044	-.014	1		
8. T2 Moral SC	**.267**	**.442**	**.413**	.190	**.216**	.158	**.345**	1	
9. T2 CP	**.314**	**.386**	**.547**	.091	.086	.039	**.443**	**.675**	1

Note. SC= Self-concept, CP= Civic purpose. The bold values indicate statistical significance and the p-values are noted on the diagonal section. Underlined $p<.05$, **Bold** $p<.01$

Research Question 1: The Association between Self-Concepts and Civic Purpose

To address research question 1, he associations between self-concepts and civic purpose, regression analysis using SAS was conducted. Three models were run (Table 12), and data at the two timepoints were analyzed separately: (1) covariates + social self-concept, (2) covariates + moral self-concept, and (3) covariates + social self-concept + moral self-concept. The results showed that at both time points, social self-concept and civic purpose were positively correlated (β=.310, *SE* = .079, $p<.001$, for T1, β =.445, *SE* = .077, $p<.001$, for T2). Likewise, moral self-concept was significantly correlated with civic purpose at both T1 (β =.753, *SE* =.084, $p<.001$) and T2 (β =.835, *SE* = .074, $p<.001$). In the model containing both social and moral self-concepts, social self-concept

was positively associated with civic purpose (β =.225, *SE* = .067, *p* <.001) at T2, but this association was not found at T1. In contrast, moral self-concept was significantly associated with civic purpose at both T1 (β =.710, *SE* = .090, *p* <.0010) and T2 (β =.728, *SE* =.080, *p* <.001). Overall, above and beyond students' different demographic backgrounds such as gender, race, school district, grade, and family recourse, their social/moral self-concepts were significantly associated with their civic purpose.

Table 12. (RQ1) Associations between Self-Concepts and Civic Purpose

Variable	**T1 Civic purpose (T2 Civic purpose)**					
	Covariates + Social self-concept		Covariates + Moral self-concept		Covariates + Social self-concept + Moral self-concept	
	B	*SE*	*B*	*SE*	*B*	*SE*
	[95% CI]		[95% CI]		[95% CI]	
Gender (Female=1)	.204	.0124	.017	.100	.062	.105
	[-.041 ~ .450]		[-.181 ~ .216]		[-.145 ~ .270]	
	-.059	.120	-.239*	.100	-.165	.096
	[-.300 ~ .178]		[-.431 ~ -.046]		[-.356 ~ .025]	
Race (White=1)	.137	.140	.033	.112	.040	.113
	[-.136 ~ .409]		[-.190 ~ .255]		[-.183 ~ .262]	
	.104	.132	.115	.115	.098	.110
	[-.158 ~ .365]		[-.111 ~ .341]		[-.120 ~ .316]	
District (Olentangy=1)	.120	.174	.048	.137	.020	.138
	[-.226 ~ .464]		[-.223 ~ .318]		[-.254 ~ .300]	
	.120	.172	.127	.135	.104	.131
	[-.222 ~ .459]		[-.140 ~ .393]		(-.155 ~ .363)	
Grade	-.182	.126	-.088	.105	-.100	.105
	[-.431 ~ .067]		[-.300 ~ .120]		[-.300 ~ .116]	
	-.052	.123	-.001	.100	-.022	.098
	[-.295 ~ .192]		[-.200 ~ .197]		[-.216 ~ .172]	
Family resource	-.014	.042	-.014	.035	-.020	.035
	[-.100 ~ .070]		[-.083 ~ .055]		[-.090 ~ .051]	

	.011	.041	-.025	.034	-.036	.032
	[-.070 ~ .093]		[-.091 ~ .041]		[-.100 ~ .029]	
Social self-concept	.310***	.079			.100	.070
	[.154 ~ .465]				[-.041 ~ .236]	
	.445***	.077			.225***	.067
	[.292 ~ .600]				[.092 ~ .358]	
Moral self-concept			.753***	.084	.710***	.090
			[.590 ~ .920]		[.534 ~ .890]	
			.835***	.074	.728***	.080
			[.689 ~ .980]		[.596 ~ .893]	

Note. Three models were conducted, and data at T1 and T2 were analyzed respectively. The model at each timepoint contained covariates and students' self-concepts at the corresponding timepoint (e.g., T1 social self-concept, T1 moral self-concept, T1 civic purpose.) Values with shades are results based on T2 measures.

Research Question 2: The Predictability of Civic Competencies on Civic Purpose

To address research question 2 about the predictability of civic competencies on civic purpose, regression analyses using SAS were conducted. Three models were run, each including civic knowledge, civic skills, or civic dispositions as a predictor along with a set of covariates: gender, race, district, grade, and family resource (Table 13). Students' civic purpose at T1 was significantly predictive of civic purpose at T2 in all models (β =.545, *SE*=.098, p <.001 for civic knowledge model, β =.547, *SE*=.100, p<.001 for civic skills model, and β =.546, *SE*=.098, p <.001 for civic disposition model). However, none of the civic competencies, namely civic knowledge, skills, and dispositions, predicted civic purpose at T2 when controlling for civic purpose at T1 and covariates in the models.

Table 13. (dRQ2) Predictability of Civic Competencies on Civic Purpose

	T2 Civic Purpose					
	B	*SE*	*B*	*SE*	*B*	*SE*
	[95% CI]		[95% CI]		[95% CI]	
Gender (Female=1)	-.219*	.114	-.230*	.116	-.234*	.116
	[-.444 ~ .006]		[-.459 ~ .001]		[-.462 ~ -.005]	
Race (White=1)	.050	.123	.057	.124	.039	.126
	[-.194 ~ .293]		[-.189 ~ .302]		[-.209 ~ .288]	
District (Olentangy=1)	-.126	.174	-.095	.170	-.086	.170
	[-.469 ~ .218]		[-.431 ~ .242]		[-.423 ~ .251]	
Grade (5^{th} grade = 1)	.128	.120	.093	.115	.074	.117
	[-.109 ~ .365]		[-.135 ~ .322]		[-.157 ~ .306]	
Family resource	.039	.038	.040	.038	.038	.038
	[-.036 ~ .115]		[-.037 ~ .116]		[-.038 ~ .113]	
T1 Social Self-Concept	.146+	.075	.145+	.075	.147+	.075
	[-.002 ~ .294]		[-.004 ~ .294]		[-.002 ~ .296]	
T1 Moral Self-Concept	.042	.122	.040	.124	.034	.075
	[-.200 ~ .283]		[-.205 ~ .285]		[-.215 ~ .282]	
T1 Civic Purpose	.545***	.098	.547***	.100	.546***	.098
	[.351 ~ .740]		[.351 ~ .742]		[.352 ~ .740]	
Civic Knowledge	.036	.036				
	[-.036 ~ .107]					
Civic Skills			.010	.016		
			[-.021 ~ .041]			
Civic Dispositions					.040	.051
					[-.060 ~ .140]	

Note. Z scores of civic purpose subscales were calculated and averaged to derive at composite scores to account for different Likert-based subscales.

Research Question 3: The Mediation of Civic Competencies between Self-Concepts and Civic Purpose

Mediation analyses were conducted using Mplus to address research question 3: whether civic competencies mediate the association between students' self-concepts (T1) and civic purpose (T2). Gender, race, school district, grade, and family resource, as well as

the civic purpose at pre-test were controlled. A total of six models were run, each with a bootstrapping method of 500 samples in order to construct bias-corrected 95% confidence intervals (Hayes, 2017; MacKinnon, 2008) (Table 14). For each self-concept model (social, moral), three types of civic competencies were tested as a mediator, respectively. All the models demonstrated acceptable fits. Model fits for the social self-concept models are as follows: civic knowledge (CFI=0.956, TLI=0.945, RMSEA= 0.043, SRMR =0.051), civic skills (CFI= 0.943, TLI = 0.929, RMSEA= 0.044, SRMR = 0.051), and civic dispositions (CFI= 0.939, TLI = 0.924, RMSEA= 0.044, SRMR = 0.050). Model fits for moral self-concept are as follows: civic knowledge (CFI= 1.000, TLI = 1.000, RMSEA= 0.000, SRMR = 0.031), civic skills (CFI= 1.000, TLI = 1.000, RMSEA= 0.000, SRMR = 0.032), and civic dispositions (CFI= 1.000, TLI =1.000, RMSEA= 0.000, SRMR = 0.031).

For the social self-concept models, none of the civic competencies (knowledge, skills, dispositions) showed a significant effect as a mediator. Similarly, these indices did not mediate the relation between moral self-concept (T1) and civic purpose (T2). However, the links between moral self-concept and each type of civic competencies were significant: moral self-concept → civic knowledge (β= .729, *SE*=.317, $p<.05$, 95% bootstrap CI [.071, 1.306]), moral self-concept → civic skills (β= 1.633, *SE* =.808, $p<.05$, 95% bootstrap CI [.057, 3.198]), and moral self-concept → civic dispositions (β= .644, *SE* =.234, $p<.01$, 95% bootstrap CI [.180, 1.103]).

Table 14. (RQ3) Mediation of Civic Learning between Self-Concepts and Civic Purpose

		β	*SE*	CI
	Social Self-Concept Model (SSC)			
Civic Knowledge	SSC → Civic knowledge (a)	-.058	.281	[-.637 ~ .450]
	Civic knowledge → Civic purpose (b)	.030	.033	[-.044 ~ .089]
	SSC → Civic purpose (c)	.124	.076	[-.027 ~ .272]
	SSC → Civic knowledge → Civic purpose (a->b->c)	-.002	.013	[-.032 ~ .023]
Civic Skills	SSC → Civic skills (a)	-.251	.558	[-1.430 ~.729]
	Civic skills → Civic purpose (b)	.012	.013	[-.015 ~ .039]
	SSC → Civic purpose (c)	.126	.077	[-.021 ~ .274]
	SSC → Civic skills → Civic purpose (a->b->c)	-.003	.012	[-.033 ~ .013]
Civic Dispositions	SSC → Civic dispositions (a)	-.118	.178	[-.519 ~ .179]
	Civic dispositions → Civic purpose (b)	.030	.047	[-.066 ~ .119]
	SSC → Civic purpose (c)	.126	.078	[-.023 ~ .271]
	SSC → Civic dispositions → Civic purpose (a->b->c)	-.003	.011	[-.028 ~ .016]
	Moral Self-Concept Model (MSC)			
Civic Knowledge	MSC → Civic knowledge (a)	.729*	.317	[.071~1.306]
	Civic knowledge → Civic purpose (b)	.017	.035	[-.054~.084]
	MSC → Civic purpose (c)	.091	.131	[-.156 ~.348]
	MSC → Civic knowledge → Civic purpose (a->b->c)	.012	.026	[-.038~069]
Civic	MSC → Civic skills (a)	1.663*	.808	[.057 ~ 3.198]

Skills	Civic skills → Civic purpose (b)	.004	.014	[-.021~.033]
	MSC → Civic purpose (c)	.097	.132	[-.156~.352]
	MSC → Civic skills → Civic purpose (a->b->c)	.007	.026	[-.034~.073]
Civic Dispositions	MSC → Civic dispositions (a)	.644**	.234	[.180 ~ 1.103]
	Civic dispositions → Civic purpose (b)	-.002	.049	[-.091~.100]
	MSC → Civic purpose (c)	.105	.135	[-.153 ~ .364]
	MSC → Civic dispositions → Civic purpose (a->b->c)	-.001	.032	[-.059 ~ .070]

Note. The results are based on standardized coefficients and civic purpose at pre-test (T1) was controlled along with other covariates (gender, race, district, grade, family resource).

Alternative Analysis: The Mediation of Moral Self-Concept between Civic Competence and Civic Purpose

As a supplementary inquiry, I explored the mediation effect of moral self-concept at T2 in the association between students' civic competencies (knowledge, skills, and dispositions) and civic purpose at T2. This additional analysis was done mainly to understand the null results for RQ2—why civic competencies (knowledge, skills, and dispositions) did not further predict civic purpose at T2 when controlling for civic purpose at T1 and other covariates. If there exists an underlying mechanism that explains the link between civic competencies and civic purpose, predictability of civic competencies might not have been found due to the failure of considering such factors. Based on the results from RQ1, there were significant associations between moral self-concept and civic purpose at both time points. Therefore, I hypothesized that students'

civic competencies would explain the variance of civic purpose only through the moral self-concept. With that, the mediation effect of moral self-concept at T2 was tested to explain the relation between civic competencies and civic purpose at T2. Civic purpose at T1 along with student demographic information were included as covariates. In each analysis, bootstrapping test was employed, using 500 samples (Table 15).

Even if the result from Research Question 2 showed that civic competencies do not predict civic purpose, examining a mediation effect of civic competencies on civic purpose remains a logical approach because the existence of significant association between X and Y is not a precondition in testing a mediation effect of M between X and Y (Hayes, 2017).

Mediation analyses using Mplus showed acceptable or good model fits: civic knowledge (CFI= 1.000, TLI= 1.000, RMSEA = 0.000, SRMR =0.040), civic skills (CFI= 1.000, TLI= 1.00, RMSEA = 0.000, SRMR =0.042), and civic dispositions (CFI= 0.962, TLI= 0.905, RMSEA = .079, SRMR =.056). The results are presented in Table 15 based on the standardized coefficients. There was a significant mediation effect of moral self-concept at T2 in the association between civic knowledge and civic purpose (T2) (β= .045, SE = .017, p<.05, 95% bootstrap CI [.010, .076]). Similarly, the association between civic skills and civic purpose (T2) (β= .024, SE=.008, p<.01, 95% bootstrap CI [.007, .040]) was significantly mediated by the T2 moral self-concept. However, this trend was not found in the relation between civic dispositions and civic purpose.

Table 15. (Alternative Analysis) Mediation of Moral Self-Concept between Civic Competencies and Civic Purpose

		β	*SE*	CI
Civic Knowledge	Civic knowledge → Moral self-concept (a)	.068*	.027	[.014 ~ .117]
	Moral self-concept → Civic purpose (b)	.674***	.112	[.444 ~ .877]
	Civic knowledge → Civic purpose (c)	-.016	.028	[-.076 ~.038]
	Civic knowledge → Moral self-concept → Civic purpose (a->b->c)	.045**	.017	[.010 ~ .076]
Civic Skills	Civic skills → Moral self-concept (a)	.035**	.011	[.011 ~ .058]
	Moral self-concept → Civic purpose (b)	.682***	.112	[.448 ~ .882]
	Civic skills → Civic purpose (c)	-.012	.011	[-.036 ~.008]
	Civic skills → Moral self-concept → Civic purpose (a->b->c)	.024**	.008	[.007 ~ .040]
Civic Dispositions	Civic dispositions → Moral self-concept (a)	.074	.044	[-.010 ~.159]
	Moral self-concept → Civic purpose (b)	.706***	.112	[.472 ~ .897]
	Civic dispositions → Civic purpose (c)	-.032	.038	[-.111 ~.043]
	Civic dispositions → Moral self-concept → Civic purpose (a->b->c)	.053+	.030	[-.007 ~.109]

Chapter 5. Discussion

The goal of this dissertation study was to examine civic competencies revealed in fourth and fifth grade students' participation in the Digital Civic Learning curriculum and how they relate to students' self-concepts and civic purpose. Specifically, I asked, first, how civic purpose is associated with students' self-concepts; second, whether civic competencies predicted students' civic purpose; and third, whether civic competencies mediate the relationship between self-concepts and civic purpose. The findings showed significant associations between students' social self-concept and civic purpose, as well as moral self-concept and civic purpose, suggesting that civic purpose is envisioned, perceived, and practiced in accordance with students' social-and moral-characteristics. Students' civic competencies, namely civic knowledge, skills, and dispositions coded using the self-recording tool Flipgrid, online discussion boards, and individual essay writing were not predictive of civic purpose. In this hypothesized association, however, moral self-concept was found to be a significant mediator linking civic competencies and civic purpose (as was shown in the alternative analysis). Civic competencies, including knowledge, skills, and dispositions, did not mediate students' self-concepts and civic purpose. Overall, this dissertation study presents a novel and performance-based/action-oriented approach to understanding students' civic competencies enacted in the context of the Digital Civic Learning curriculum. In this section, I discuss findings and implications for each research question, followed by the study's strengths, limitations, and educational impacts.

Associations between Self-concepts and Civic purpose

This study showed that when social and moral self-concepts were examined separately, students' social self-concept was significantly associated with their civic purpose at both time points and this pattern was same for moral self-concept. This suggests that early adolescents' intention on, motivation toward, and participation in civic action, as demonstrated in their self-report civic purpose, were explained by how much they appraise themselves as sociable (i.e., social self-concept) and the levels at which moral values (e.g., just, fair) are important to themselves (i.e., moral self-concept), regardless of their backgrounds such as gender, race, grade, school district, and family resources. This result aligns with the previous scholars' standpoint that adolescents' civic outcome is associated with, and influenced by, their sociocognitive and moral development (Alvis & Metzger, 2020; Metzger et al., 2018; Metzger & Smetana, 2009).

However, when entering both social and moral self-concepts in the same statistical model predicting civic purpose, early adolescents' social self-concept was associated with their civic purpose only at Time 2 but not Time 1. It is possible that students previously did not value social skills as much as morality as they considered their civic purpose. Learning the two civic units within DCL may have helped them realize how a series of civic actions (e.g., playing a leadership role, discussing current events) require both moral understanding and individuals' social capacity, such as initiating relationships and working with others. This suggests that early adolescents' perception of civic purpose as a social construct might become salient as they provide and receive more social inputs from peers and their teachers during the units. Digital

civic learning curriculum, where students were given fruitful opportunities to contribute to their problem-solving in small groups, may serve as a good context to envision socially desirable goals (herein civic purpose) (Wentzel, 2000) because socially valued goals are largely dependent on one's self-appraisal as a valuable social member (Wentzel, 2002).

It is important to note that students' self-concepts did not change significantly from pretest to posttest. What changed was the magnitude of associations between students' self-concepts and civic purpose. It is plausible that early adolescents came to understand their social and moral characteristics related to their responsibility as citizens through the continual social practices in DCL. Students were prompted to think about their standpoints and communicate the reasons with peers. This might have prompted them to reflect on their value systems. Moral development literature also suggests that students in this age (middle childhood ~ early adolescence) are at a particularly noticeable period with respect to developing moral self-concept (Kingsford et al., 2018; Krettenauer, 2013); students' cognitive advances enable them to evaluate, appraise, and represent themselves at a higher-order (Harter, 2007), which makes their moral self-concept more reliable and interpretable in relation to other meaningful outcomes such as civic purpose in this case. Taken together, students' engagement with DCL that accompanies a series of self-reflective activities (e.g., individual writing, Flipgrid, discussion board) along with collaborative work is likely to help them perceive civic purpose more in relation to their own social and moral characteristics.

Associations between Civic Competencies and Civic Purpose

None of the civic knowledge, skills, and dispositions that were captured during students' DCL predicted the levels of civic purpose at Time 2 when controlling for students' demographic backgrounds (gender, race, grade, school district, family resource), their social-, and moral-self-concepts, and civic purpose at Time 1. The findings are unexpected because many civic development scholars stress the importance of civic competencies (civic knowledge, skills, and dispositions) in adolescents' civic engagement (Diković, & Zečević, 2020; Ten Dam et al., 2011). However, I should acknowledge that thus far, very little is known about early adolescents' civic purpose: what educational practices can help early adolescents develop civic purpose, and what individual or contextual factors may foster or hinder their civic purpose development. Additionally, empirical studies that assessed early adolescents' civic competencies under a performance-based setting remains scarce. Most of the extant studies relied on self-rated evaluations of their civic skills or actions (e.g., how good are you at adapting to other people's rules and habits?) (Bos et al., 2016; Cohen & Chaffee, 2013; Metzger et al., 2018). The current study is therefore pioneering and exploratory given the limited amount of knowledge established in this field.

Using a performance-based approach, I investigated students' levels of knowledge, skills, and dispositions revealed in their online discussion, individual writing, and self-record data generated during their ongoing learning in the DCL curriculum. This type of data collected during the organic learning processes yields its unique merits in that students' civic participation in the classroom setting is a miniature of their civic

participation in other settings in the future (Kirlin, 2003). However, this type of data may have been affected by other factors such as students' academic motivation (e.g., how a student was willing to participate in discourses), their relationships with group/classmates (e.g., how a student felt comfortable sharing their thoughts in particular group/class settings), their understanding of specific content or concepts (e.g., whether a student understood the content well enough to engage in discussions meaningfully), or their technology efficacy (e.g., how much a student felt competent in using digital tools). While the way civic competencies were assessed in this study may not be separated from the aforementioned factors that students bring into their participation, the measure of civic competencies may have more ecological validity because it captures civic competencies in a more authentic, organic, and contextualized way, which may be more predictive of how students' civic competencies would unfold in real-life settings.

Early adolescents' civic competencies during the DCL project may change dynamically depending on the topics of civic learning and the contexts of student participation. Therefore, approaching civic competencies using the aggregated, average scores across modalities and topics may not capture students' full potential to enact their civic competencies. This may explain the null association between civic competencies and civic purpose. Employing a microgenetic approach to zoom in the detailed processes of civic learning might be useful to uncover how civic competencies change across phases, contexts, or modalities and whether the learning trajectories predict civic purpose. In addition, compared to civic competencies, civic purpose is a relatively distal civic outcome. In order to investigate how students' civic competencies relate to civic purpose

(distal outcome), more proximal outcomes (e.g., social perspective taking, respect) may be needed to bridge between the immediate outcome (e.g., civic competencies) and the distal outcome (e.g., civic purpose).

Moral Self- Concept as a Mediator between Civic Competencies and Civic Purpose

Civic competencies did not mediate the association between self-concepts (social, moral) at T1 and civic purpose at T2 (Research Question 3). However, students' moral self-concept at Time 2 significantly mediated the association between students' civic competencies during the DCL and civic purpose at Time 2, controlling for student backgrounds and civic purpose at Time 1 (Alternative analysis). This pattern was found for civic knowledge and civic skills, but not for civic disposition. First, the finding of significant moral self-concept as a mediator between civic knowledge and civic purpose may be understood in light of social cognitive theory of moral self (Bandura, 1999). Bandura argued that morally relevant knowledge (or reasoning) does not result in morally right actions without one's self-regulatory mechanism where moral agency is exercised. This is consistent with moral psychologists' view that moral self-concept (or moral identity) provides a strong motivation to align one's moral knowledge to coherent/corresponding moral behaviors to maintain a sense of self-congruency (Flanagan et al., 2015; Matsuba et al., 2007). Likewise, students' moral self-concept may potentially activate or prompt their moral self-regulatory processes where their knowledge becomes meaningfully connected to their later commitment to civic purpose. That is, students in this age group may need to have a high moral self-concept in order for

their civic knowledge to be manifested and predictive of civic purpose. Thus, Bandura's moral disengagement theory can be particularly relevant to adolescents given that their understanding of civic activities is inherently morally charged (Metzger et al., 2016; 2018).

The classical study by Hart and Fegley (1995) found that adolescents who were exceptionally committed to civic actions did not necessarily have greater levels of moral knowledge (here, corresponding concept is civic knowledge) but instead, showed significantly higher tendency to describe themselves with moral descriptors (e.g., "honest" "trustworthy" "helping others"). Other studies showed that adolescents who perceived themselves as moral (e.g., I am respectful, I have clear values) showed greater volunteer motivation (e.g., to improve my community) (Reimer et al., 2009), showing how critical it is for adolescents to embrace moral values when it comes to explaining the *self-transcendence* aspect of civic purpose.

These findings lend support to the crucial role of moral self-concept as a drive of morally charged behaviors, decisions, or commitments (Arsenio & Lemerise, 2004). Even if there exist mixed arguments about how much early adolescents' moral self-concept is reliable (see Kingsford et al., 2018) or whether the self and morality integration is available to them (see Krettenauer & Hertz, 2015), it seems plausible that the principle of self-consistency or congruence (Blasi, 1983; Hardy, 2006) works similarly for young students, whereby individuals' high moral self-concept (centrality of moral values in understanding self) links what they know and what they do about it.

Second, moral self-concept significantly mediated the association between civic skills and civic purpose, which suggests that students who demonstrated more civic skills during DCL had higher moral self-concept by the end of the project, which was associated with higher civic purpose. Even if there was no direct association between civic skills and civic purpose, these two constructs were linked by moral self-concept. According to the NAEP civics framework, which guided the current study's approach to operationalize and identify civic competencies, civic skills inherently involve social, participatory, and intellectual components (Littenberg-Tobias, 2021). Therefore, students' civic skills in this study represent their cognitive and social participation levels exhibited over DCL, where their active information processing and perspective taking occurred (Ha et al., 2019; Kim et al., 2023; Lin et al., 2019; 2022; Wen et al., 2023). The more students generated ideas, reviewed different standpoints, communicated their reasoning, and responded to collective discourses, the higher civic skills they obtained. Vygotsky (1978) would describe such social and intellectual participation during the DCL (which was shown in civic skills) as an innovative learning process in which students' social inputs from others (*interpsychological sphere*) are digested, understood, and transformed to be individuals' capacity to express, explain, elaborate, and defend ideas independently (*intrapsychological sphere*) (Glassman, 2020; Pena-Shaff & Nicholls, 2004). According to his account, this social process followed by *internalization* leads to students' meaningful cognitive and social development, which is catalyzed and expedited especially when multiple perspectives are communicated, and alternative solutions are explored together (Reznitskaya et al., 2009; Juuso, 2007) as in DCL.

The current finding, however, questions if this sociocultural and constructivist theory account would be sufficient to explain students' growth as citizens; moral self-concept as a significant mediator between civic skills and civic purpose suggests that only when civic skills are coupled with moral self-concept would they predict civic purpose. Compelling evidence suggests that early adolescents' engagement in collaborative discussion with peers, using socially morally complex topics, acts as an effective learning process that prepares students as competent citizens (Alongi et al., 2016; Kuhn, 2019; Michaels et al., 2008). Although not empirically tested in the aforementioned studies, such a change or improvement in students with respect to their civic skills (e.g., critical thinking) may be contingent on or occur hand in hand with moral values (e.g., justice, caring). More specifically, it is possible that students' argumentative discussions on controversial open-ended questions centering on social/moral values prompted and challenged them to reflect on, reconsider, and explore their value system, whereby endorsing and cultivating moral values in themselves (García-Moriyón et al., 2020; Sharp, 1995) and helping them align their value systems with civic purpose.

Along that line, merely focusing on civic skills of sharing one's standpoint, making justifications with relevant evidence, coming up with counterarguments, responding to others' questions, and dis/agreeing to others' views with elaborations may not yield a comprehensive picture of how one's civic purpose is formulated. Such skill sets are valid evidence of reciprocal and cyclical learning processes within the DCL, which served as a context and medium of one's cognitive and social activation. However, one step further, how participants can become capable of utilizing civic skills in

accordance with their moral self-concept should be apprehended for a more complete view of civic purpose. Students' communicative, dialectic, and reflective processes, activated by the usage of civic skills, can only meaningfully inform civic purpose when such skills were linked with endorsed moral values. This finding portrays how the notion of *praxis* (Freire, 1970) may be practiced and realized in early adolescents' digital civic learning, where students' steady reflection on morally complex topics is manifested as civic actions.

Third, moral self-concept did not mediate the linkage between civic dispositions and civic purpose. It was surprising that the regression path from civic disposition to moral self-concept (Time 2) was nonsignificant, which caused the null indirect effect of civic dispositions on civic purpose. It is important to note that students' civic dispositions were the least salient among the three civic competencies. Civic dispositions capture affective, social, and value driven propensity to understand the social world. It is possible that civic dispositions might have been underestimated in the DCL context considering that not all students were comfortable to express their empathetic concerns to consider others' perspectives (e.g., social perspective taking) via essays, Flipgrid, or discussion board.

The Role of Digital Civic Learning in Early Adolescents' Civic Purpose

The results illuminate several features of DCL that can be understood along with students' social and moral self-concepts and their civic purpose. First, the social elements of DCL, such as inviting, encouraging, and celebrating different opinions shared by other

members in a community of inquiry, might have helped students to embrace diversity experienced with peers in the classroom, thereby allowing them to see the larger world in relation to what they learned and practiced over the DCL curriculum. In this type of collaborative learning where positive social norms are emphasized (e.g., turn takings, equal participation, respectful attitudes), students are welcome to bring different and conflicting ideas into classroom conversations (Tellado, 2017), which heightens the openness of the learning environment, thereby formulating a supportive community with a sense of trust (Barss, 2016). Experiencing such an egalitarian dialogue, where everyone is entitled to share their unique thoughts, helps students learn that there may not be one right or wrong answer in resolving societal problems (Trickey & Topping, 2006), and that the nature of civic issues is inherently controversial, complicated, multifaceted, and fuzzy (Parker et al., 1989) due to its different impacts on different groups of people (Dewey, 1916). Through this "mode of social inquiry" (Dewey, 1966, p.56) during DCL where "unforced force of the better argument" (Habermas, 1998, p.306) is continually practiced, students may grow to appreciate classmates' diverse backgrounds, experiences, and beliefs (Howell et al., 2011) and develop empathy for others (Clark et al., 2003; Collins, 2005) with enhanced sensitivity to others' needs (Trickey & Topping, 2006), eventually motivating them to engage in communities with higher civic efficacy (Avery et al., 2013). These studies showing the effectiveness of dialogic learning with open-ended questions illustrate how early adolescents' experiences with DCL might inform their civic purpose. Students' social and cognitive disequilibrium experienced in them during active discussions might also have expanded their capabilities to accept, respect,

and welcome different people, which are essential skills that can be transcended to civic purpose (Glina, 2009; Trickey & Topping, 2006). These civic competencies were evident in students' essays, Flipgrid, and discussion boards during DCL, particularly with regard to skill aspects such as positioning of argument, justifying perspectives, elaborating ideas, and responding to others based on the multidimensional civic competencies coding scheme; 87.62% of sentences received valid civic skills codes (Table 10).

Second, DCL seems to have catalyzed students' deliberate reasoning and reflection on moral concerns, based on the finding that their moral self-concept became more associated with civic competencies at Time 2 than at Time 1. Students had to struggle to think through what made the community benefit the most, which decisions were fair versus unfair, and whose responsibility it was to face food insecurity in the midst of difficult times. These concerns inevitably involved moral values. As Dewey (1916) noted, individuals' reasoning and decisions require considerations of their impacts on others and their relations with moral values (e.g., justice), both of which serve as indispensable conditions of democracy. Those who are able to 'think' can also doubt and question their values they hold according to their self-understandings (Lipman, 2003). In this regard, students' DCL experiences with rich opportunities to enact civic competencies are likely to have challenged them to (re)think, reflect on, and act upon their moral values.

Additionally, the principle of personal relevance in DCL (i.e., personal connections between DCL materials and their own lives) might have helped students see their life outside the classroom in line with or as an extension of their DCL experiences

(see Iaconelli & Anderman, 2021); for instance, making donations to those in need may be seen as a valuable action to practice what they learned during the economy unit. Dialogic inquiry-based learning using literature can help students connect the readings with their daily lives (Vansieleghem, 2005), thereby making the classroom discourse personally engaging (Lin et al., 2015; Waggoner et al., 1995). While students verbalize their thoughts and listen to others, they co-construct knowledge and create meaning of their learning at a personal level (Vygotsky, 1978), the process of "naming the world" (Freire, 1970, p.88). Students in DCL did not passively accept what they learn as static knowledge, but rather, attempted to review, appraise, verify, and question the validity of what they discuss with a critical mindset (*critical consciousness*). Their understanding and knowledge may grow more reflective of the reality they live in, which taps into the notion of *praxis* suggested by Freire (1970). While students are engaged in continual discussions with others and self-reflections, such dialectic, flexible ways of interacting with the world in classrooms and online, so called *dialectic relationship between place and space* (Glassman & Burbidge, 2014), may be particularly useful for cultivating students' awareness, motivation, and action in civic realms (i.e., civic purpose) living in 21st century; they come to believe that creating behavioral gestures may hold power to change realities around them given the dialectical nature of the world and knowledge (i.e., action based on reflection recreates the realities) (Tan, 2018). Immersive components of DCL may have further facilitated this dialectic process since students were naturally introduced to and participated in virtual, immersive realities seamlessly during their learning (Tilak et al., 2023). That is, students' DCL experiences that

accompany constant reviews and reflections of moral guides (values) may have made their civic purpose more accessible while they learned how to act in accordance with their reflection to transform the world, the realities (Freire, 1970; Roberts, 1998).

Limitations and Future Directions

The current study, despite its unique contributions, is not without its limitations. First, the assessment of students' self-reports was administered twice, before and after digital civic learning Unit 3 and Unit 4. Even if Time 1 supposedly served as the pre-test, this could not reflect the true baseline of the pre-test given that students were already exposed to the Digital Civic Learning curriculum's Unit 1 and Unit 2 prior to the Time 1 assessment. Therefore, the current study's Time 1 and Time 2 can only be interpreted concerning the dosage of the Digital Civic Learning experience. Relatedly, the lack of change in civic purpose from Time 1 to Time 2 might be due to the short time period between Time 1 and Time 2, which was at best four to five weeks long. The intervention might be too short to detect the hypothesized change in civic purpose and its relationship with other focal constructs.

Second, civic competencies were identified and coded based on students' expressed sentences either as a verbal or written form, demonstrated in self-recordings, individual writings, and online discussion boards. That is, civic competencies were captured only when students overtly expressed or demonstrated civic knowledge (what they know), skills (how they communicate), and dispositions (why they think/feel a

certain way). Any unexpressed civic competencies could hardly be identifiable using the current approach of coding civic competencies.

Moreover, unlike self-reported surveys or standardized tests, civic competencies, which were assessed using this performance-based approach during the authentic, organic learning environment, might have been influenced by several factors (e.g., context, motivation) other than the civic competencies, if we merely followed a narrow definition of civic competencies. For instance, students' interactions on the online discussion boards can be hindered by their poor relationships with groupmates, suggesting that the evaluation of civic competencies from students' discussion boards might have under-evaluated their civic competencies. However, if civic competencies can be broadly defined in ways that incorporate students' ability to maintain positive communications with others, the current measure of civic competencies would more adequately reflect their civic competencies. In addition, I examined multiple sources of data (online discussion boards, Flipgrid, and individual writings) to derive at students' civic competencies. This approach allowed me to observe students' competencies to a greater extent, compared to relying on single source of data. This is because some students may feel more comfortable sharing their opinions in one modality over the other, as suggested in Table 8-9. Future studies may consider combining more than one measure to assess students' civic competencies, capturing both demonstrated performances at an organic learning setting, while considering their (unexpressed) internal potential.

Third, students' talkativeness or level of verbal or written participation (e.g., essay length, talkativeness in the self-recording) was not controlled in the analyses due to

its high correlations with civic competencies levels (r = 632 for civic dispositions, r =.797 for knowledge, r =.968 for skills); the multicollinearity issue caused unreliable statistical inferences. It is understandable that the fluency aspect (e.g., many ideas) of students' participation was highly correlated with civic competencies because each sentence was used as the unit of analysis for coding civic knowledge, skills, and dispositions. That is, the more sentences a student submitted, recorded, and posted over the two units, the more data I had to code for that student's civic competencies, yielding a higher likelihood of scoring high civic competencies. Because of this approach, the civic competencies are proportional to the levels of student participation, with the quantitative aspect of students' submissions (transcribed recordings, online discussion posts, individual writing) possibly being over-evaluated. However, in light of sociocultural theory (Vygotsky, 1978; 1981), "the participation is itself the process of appropriation" (Rogoff, 1995, p.151) where students' thinking is transformed and grow skilled (Anderson et al., 2001). Therefore, students' repeated practices of communications (reflected in the number of sentences they generated) through the medium of digital tools reflect an important facet and process of civic competencies. Future studies should devise an integrated approach that incorporates the quantitative and qualitative aspects of students' civic participation.

Last but not least, the current findings cannot be translated into causal inferences given that there was no control group to compare the results. Even if the study reveals the educational potential of DCL as an effective learning method for youth civic purpose, analyses should base the data derived from quasi-experimental design study in order to

empirically support the causation. Future studies may test the associations using the data obtained from both control- and DCL experimental groups.

Implications and Contribution

The current study has several unique contributions to expanding the extant understanding of early adolescents' civic purpose in relation to their social, moral self-concepts and civic competencies. Early adolescents' civic purpose has been largely ignored and understudied thus far (Quinn & Bauml, 2018). Yet, developmental literature suggests that early adolescents are at a promising and appropriate stage to develop civic outcomes given their ability to take others' perspectives (Eisenberg et al., 2005), collaborate with others (Michaels et al., 2008), generate critical standpoints on social topics (Osorio, 2018), and develop a greater interest in the larger world like our society (Van Goethem et al., 2014). By providing an empirical support on how early adolescents' civic purpose is associated with other developmental constructs such as social, moral self-concepts, this study sheds light on the characteristics of civic purpose conceived by early adolescents, and accordingly informs how it can be possibly cultivated.

Second, unlike previous studies relying on self-report surveys (e.g., Metzger et al., 2018) or standardized tests (e.g., National Assessment of Educational Progress), the current study captured and assessed students' civic competencies derived from their authentic participation in sociocultural activities, which resemble their (current, future) civic participation in real-life setting. Using collaborative, argumentative, reflective, and immersive social activities that introduce them to the real-world civic issues, student-

demonstrated civic competencies now seamlessly and efficaciously reflect their actual performances in life (Herrington et al., 2007) better than other artificial assessment far from the nature of the task (Reeves & Okey, 1996). As a response to the pressing need of authentic activities in civic education (Levine & Kawashima-Ginsberg, 2015), the current study fully recognized the roles of peers as social and intellectual input by design (Heberle et al., 2020), utilized the pedagogical strength of civic talk with open-ended dialogic instruction (Lin et al., 2022), introduced and immersed students to the sociohistorical contexts of the world (Lo, 2017; Tilak et al., 2023), while encouraging students to share digital tools with their own agency (Glassman, 2020). With these core elements that are acknowledged as critical in civic learning, the civic competencies identified during their actual learning with such digital civic learning, represent their authentic, contextualized demonstration of their capacities.

Third, the role of moral self-concept was highlighted in this study, linking civic competencies and civic purpose meaningfully. Despite the controversies centering around how mature/integrated the early adolescents' moral identity may be, the study lends support to the valid psychological process in early adolescents where the centrality of moral values in them acts as bridging what they know (civic knowledge) and what they do about it (civic purpose), as similarly shown in previous studies (e.g., Krevans & Gibbs, 1996). Likewise, students' know-hows (civic skills) predicted their civic commitments (civic purpose) mediated by their moral self-concept. These findings may be understood with respect to the emerging self- morality integration during adolescence (Patrick & Gibbs, 2012). Overall, the findings do not only add values to the efficacy of

digital civic learning but also demonstrate the importance of nourishing students' moral values in order to streamline, invigorate, and validate the possible beneficial learning processes of civic curriculum. Furthermore, this study will provide a unique insight on how teachers in social studies classroom or in other interdisciplinary fields can incorporate a variety of class activities in a way that experience synergetic influences derived from multimedia usages, online participation, collaborative group activities, and discussion and writing.

Last but not least, this study reveals the potential of digital civic learning as an instruction and pedagogy to inform students' civic purpose related to their self-concepts and civic competencies. The associations between students' previous self-concepts (social, moral) and civic purpose, as well as civic competencies, were explained specifically in the context of digital civic learning that consists of innovative and research informed principles: dialogic learning (Lin et al., 2022), virtual immersive experiences (Glassman et al., 2022), and personal relevance (Iaconelli & Anderman, 2021) using digital tools. DCL, which served as not only the social studies curricular context but also the intentional study design, made it possible to efficaciously capture "how students come to know" (i.e., learning processes) (Glassman, 2020, p.1898) as opposed to merely investigating "what" students know, which the current educational systems primarily or overly focus on. By employing a sophisticated curricular/study design that maximizes the potential of capturing a variety of 'how' aspects of student participation and learning in digital realms (as well as in-person setting), researchers will be able to inquire, explore, and observe how today's teenagers demonstrate civic competencies, and how their civic

purpose is shaped along with their self-concepts, in a wider spectrum, especially in multimedia learning, which is their daily life context.

Bibliography

Adeyemi, B. A. (2017). Students' self-concept, knowledge of verbal reasoning skill and learning readiness as correlates of achievement in Civic in senior secondary schools in Osun State. *Psychology Research, 7*(1), 50-56.

Akar, B. (2016). Dialogic pedagogies in educational settings for active citizenship, social cohesion and peacebuilding in Lebanon. *Education, Citizenship and Social Justice, 11*(1), 44-62.

Alongi, M. D., Heddy, B. C., & Sinatra, G. M. (2016). Real-world engagement with controversial issues in history and social studies: Teaching for transformative experiences and conceptual change. *Journal of Social Science Education*, *15*(2), 26-41.

Alvis, L. M., & Metzger, A. (2020). Dimensions of adolescent civic reasoning: An examination of individual differences. *Journal of adolescent research, 35*(3), 309-340.

Ammon, M., Furco, A., Chi, B., & Middaugh, E. (2002, March). *Service learning in California: A profile of the CalServe service learning partnerships (1997–2000).* University of California, Berkeley: Service Learning-Research and Development Center.

Anderson, R. C., Nguyen-Jahiel, K., McNurlen, B., Archodidou, A., Kim, S. Y., Reznitskaya, A., Tillmanns, M., & Gilbert, L. (2001). The snowball phenomenon: Spread of ways of talking and ways of thinking across groups of children. *Cognition and instruction*, *19*(1), 1-46.

Andrews-Todd, J., & Forsyth, C. M. (2020). Exploring social and cognitive dimensions of collaborative problem solving in an open online simulation-based task. *Computers in human behavior*, *104*, 105759.

Arsenio, W. F., & Lemerise, E. A. (2004). Aggression and moral development: Integrating social information processing and moral domain models. *Child development*, *75*(4), 987-1002.

Arthur, J., & Davison, J. (2000). Social literacy and citizenship education in the school curriculum. *The Curriculum Journal, 11*(1), 9-23.

Astuto, J., & Ruck, M. (2017). Growing up in poverty and civic engagement: The role of kindergarten executive function and play predicting participation in 8th grade extracurricular activities. *Applied Developmental Science, 21*(4), 301-318.

Avery, P. G., Levy, S. A., & Simmons, A. M. (2013). Deliberating controversial public issues as part of civic education. *The Social Studies, 104*(3), 105-114.

Aquino, K., Reed II, A., Thau, S., & Freeman, D. (2007). A grotesque and dark beauty: How moral identity and mechanisms of moral disengagement influence cognitive and emotional reactions to war. *Journal of Experimental Social Psychology, 43*(3), 385-392.

Aquino, K., & Reed II, A. (2002). The self-importance of moral identity. *Journal of personality and social psychology, 83*(6), 1423.

Bandura, A. (1997). The anatomy of stages of change. *American journal of health promotion: AJHP, 12*(1), 8-10.

Bandura, A. (1999). Moral disengagement in the perpetuation of inhumanities. *Personality and Social Psychology Review, 3,* 193–209.

Barriga, A. Q., Morrison, E. M., Liau, A. K., & Gibbs, J. C. (2001). Moral cognition: Explaining the gender difference in antisocial behavior. *Merrill-Palmer Quarterly (1982-),* 532-562.

Barss, K. (2016). Setting the stage for civil discourse. *Social Education*, *80*(5), 272-275.

Bauml, M., Quinn, B. P., Blevins, B., Magill, K. R., & LeCompte, K. (2023). "I really want to do something": How civic education activities promote thinking toward civic purpose among early adolescents. *Journal of Adolescent Research, 38*(1), 110-142.

Bergen, J. K., & McLean, L. R. (2014). Students as citizens: Conceptions of citizenship in a social studies curriculum. *TCI (Transnational Curriculum Inquiry), 11*(2), 1-24.

Berndt, T. J., & Burgy, L. (1996). Social self-concept. In B. A. Bracken (Ed.), *Handbook of self-concept: Developmental, social, and clinical considerations* (pp. 171-209). New York, NY: Wiley.

Bhattacharjee, D., Paul, A., Kim, J. H., & Karthigaikumar, P. (2018). An immersive learning model using evolutionary learning. *Computers & Electrical Engineering, 65*, 236-249.

Blasi, A. (1983). Moral cognition and moral action: A theoretical perspective. *Developmental review, 3*(2), 178-210.

Bos, H., Gartrell, N., Roeleveld, J., & Ledoux, G. (2016). Civic competence of Dutch children in female same-sex parent families: A comparison with children of opposite-sex parents. *Youth & Society*, *48*(5), 628-648.

Brunell, L. A. (2013). Building global citizenship: Engaging global issues, practicing civic skills. *Journal of Political Science Education, 9*(1), 16-33.

Bryne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). New York, NY: Routledge

Burrow, A. L. (2015). Illuminating pathways to civic purpose. *Human Development*, *58*(2), 131-136.

Kanacri, B. P. L., Pastorelli, C., Zuffiano, A., Eisenberg, N., Ceravolo, R., & Caprara, G. V. (2014). Trajectories of prosocial behaviors conducive to civic outcomes during the transition to adulthood: The predictive role of family dynamics. *Journal of Adolescence, 37*(8), 1529-1539.

Cha, W., Tilak, S., Wen, Z., Kim, S., Sheng, Y., Glassman, M., Lin, T-Z., & Anderman, E. M. (2023). *How socioeconomic status and online digital citizenship predict student's modality choice (Flipgrid vs discussion board)*. American Educational Research Association.

Christner, N., Pletti, C., & Paulus, M. (2020). Emotion understanding and the moral self-concept as motivators of prosocial behavior in middle childhood. *Cognitive Development*, *55*, 100893.

CIRCLE. (2019, May 30). *28% of young people voted in 2018.* Tufts University. https://circle.tufts.edu/latest-research/28- young-people-voted-2018

Clark, A. M., Anderson, R. C., Kuo, L. J., Kim, I. H., Archodidou, A., & Nguyen-Jahiel, K. (2003). Collaborative reasoning: Expanding ways for children to talk and think in school. *Educational Psychology Review, 15*(2), 181-198.

Cohen, A. K., & Chaffee, B. W. (2013). The relationship between adolescents' civic knowledge, civic attitude, and civic behavior and their self-reported future likelihood of voting. *Education, citizenship and social justice, 8*(1), 43-57.

Collins, C. (2005). *Education for a just democracy: The role of ethical inquiry*.[Doctoral dissertation, University of South Australia]. Adelaide.

Crocetti, E., Jahromi, P., & Meeus, W. (2012). Identity and civic engagement in adolescence. *Journal of adolescence, 35*(3), 521-532.

Damon, W. (1996). The lifelong transformation of moral goals through social influence. *Interactive mind*s, *42*(3), 198-220.

Damon, W., Menon, J., & Cotton Bronk, K. (2003). The development of purpose during adolescence. *Applied developmental science, 7*(3), 119-128.

Dewey, J. (1916). *Democracy and education.* New York, NY: Free Press.

Diemer, M. A., Rapa, L. J., Voight, A. M., & McWhirter, E. H. (2016). Critical consciousness: A developmental approach to addressing marginalization and oppression. *Child Development Perspectives, 10*(4), 216-221.

Diemer, M. A., & Rapa, L. J. (2016). Unraveling the complexity of critical consciousness, political efficacy, and political action among marginalized adolescents. *Child Development, 87*(1), 221-238.

Diković, M., & Zečević, M. (2020). Children and youth's acqusition of the civic competence: a comparative analysis of the Republic of Croatia and England. *Economic research-Ekonomska istraživanja*, *33*(1), 1222-1239.

Eccles, J. (1999). The development of children ages 6 to 14. *The Future of Children, 9*(2), 30–44. https://www.jstor.org/stable/1602703.

Eisenberg, N., Zhou, Q., Spinrad, T. L., Valiente, C., Fabes, R. A., & Liew, J. (2005). Relations among positive parenting, children's effortful control, and externalizing problems: A three-wave longitudinal study. *Child Development, 76*(5), 1055-1071.

Ekman, J., & Amnå, E. (2012). Political participation and civic engagement: Towards a new typology. *Human Affairs, 22*(3), 283-300.

Eyler, J., Giles Jr, D. E., & Braxton, J. (1997). The impact of service-learning on college students. *Michigan Journal of Community Service Learning, 4*, 5-15.

Findlay, L. C., Girardi, A., & Coplan, R. J. (2006). Links between empathy, social behavior, and social understanding in early childhood. *Early Childhood Research Quarterly, 21*(3), 347-359.

Flanagan, C. A., Lin, C., Luisi-Mills, H., Sambo, A., & Hu, M. (2015). Adolescent civic development across cultures. In L. Jensen (Ed.), *The Oxford handbook of human development and culture: An interdisciplinary perspective* (pp. 471–484). New York, NY: Oxford University Press. doi:10.1093/oxfordhb/9780199948550.013.29

Freire, P. (1970). *Pedagogy of the oppressed.* New York, NY: Continuum.
Freire, P. (1973). *Education for critical consciousness.* New York, NY: Seabury Press
Gacek, M., Pilecka, W., & Fusińska-Korpik, A. (2014). Psychometric properties of Self-Perception Profile for Children in a Polish sample. *Polish Journal of Applied Psychology, 12*(3), 85-104.
Galston, W. A. (2004). Civic education and political participation. *PS: Political Science & Politics, 37*(2), 263-266.
Galston, W. A. (2007). Civic knowledge, civic education, and civic engagement: A summary of recent research. *International Journal of Public Administration, 30*(6-7), 623-642.
García-Moriyón, F., González-Lamas, J., Botella, J., González Vela, J., Miranda-Alonso, T., Palacios, A., & Robles-Loro, R. (2020). Research in moral education: The contribution of P4C to the moral growth of students. *Education Sciences*, *10*(4), 119.
Gibbs, J. C. (2019). *Moral development and reality: Beyond the theories of Kohlberg, Hoffman, and Haidt.* Oxford University Press.
Glade, J. A. (2020). The influence of number talks on the use of accountable talk. [Unpublished master dissertation]. Northwestern College.
Glassman, M. (2020). The internet as a context for participatory action research. *Education and Information Technologies*, *25*(3), 1891-1911.
Glassman, M., & Burbidge, J. (2014). The dialectical relationship between place and space in education: How the Internet is changing our perceptions of teaching and learning. *Educational Theory*, 64, 15–32.
Glassman, M., & Erdem, G. (2014). Participatory action research and its meanings: Vivencia, praxis, conscientization. *Adult Education Quarterly, 64*(3), 206-221.
Glassman, M., Lin, T. J., & Ha, S. Y. (2022). Concepts, collaboration, and a company of actors: a Vygotskian model for concept development in the 21st century. *Oxford Review of Education*, 1-16.
Glina, M. B. (2009). Democracy as morality: Using philosophical dialogue to cultivate safe learning communities. *Analytic Teaching and Philosophical Praxis, 29*(1), 31-38.
Golombek, S. (2006). Children as citizens. *Journal of Community Practice, 14*(1/2), 9–28
Granleese, J., & Joseph, S. (1994). Reliability of the Harter Self-Perception Profile for Children and predictors of global self-worth. *The Journal of Genetic Psychology, 155*(4), 487-492.
Ha, S. Y., Lin, T. J., Li, W. T., Kraatz, E., Chiu, Y. J., Hong, Y. R., Tsai, C-C., & Glassman, M. (2020). Peer Exclusion: a Social Convention or Moral Decision? Cross-Cultural Insights into Students' Social Reasoning. *Journal of Cognition and Culture*, *20*(1-2), 127-154.
Habermas, J. (1998). *Between facts and norms.* Cambridge, MA: MIT Press.
Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A Global Perspective* (7th ed.). Upper Saddle River, NJ: Pearson.
Hamilton, L. S., & Kaufman, J. H. (2022). Indicators of equitable civic learning in US Public schools. *Educational Assessment, 27*(2), 187-196.

Han, H., Liauw, I., & Kuntz, A. F. (2019). Moral identity predicts the development of presence of meaning during emerging adulthood. *Emerging Adulthood*, *7*(3), 230-237.

Hardy, S. A. (2006). Identity, reasoning, and emotion: An empirical comparison of three sources of moral motivation. *Motivation and Emotion, 30*(3), 205-213.

Hardy, S. A., & Carlo, G. (2011). Moral identity: What is it, how does it develop, and is it linked to moral action? *Child Development Perspectives, 5*(3), 212-218.

Hart, D., & Damon, W. (1988). Self-understanding and social cognitive development. *Early Child Development and Care, 40*(1), 5-23.

Hart, D., Matsuba, K., & Atkins, R. (2014). Civic engagement and child and adolescent well-being. In *Handbook of Child Well-Being: Theories, Methods and Policies in Global Perspective* (pp. 957-975). Springer Netherlands.

Hart, D., & Fegley, S. (1995). Prosocial behavior and caring in adolescence: Relations to self-understanding and social judgment. *Child development, 66*(5), 1346-1359.

Harter, S. (1985). *Manual for the Self-Perception Profile for Children.* Denver, CO: University of Denver.

Harter, S. (2007). The self. In W. Damon, R. M. Lerner, & N. Eisenberg (Eds.). *Handbook of child psychology (pp. 505–570).* (6th ed.).

Heberle, A. E., Rapa, L. J., & Farago, F. (2020). Critical consciousness in children and adolescents: A systematic review, critical assessment, and recommendations for future research. *Psychological Bulletin*, *146*(6), 525.

Herrington, J., Reeves, T. C., & Oliver, R. (2007). Immersive learning technologies: Realism and online authentic learning. *Journal of Computing in Higher Education, 19*(1), 80-99.

Hess, D. E. (2009). *Controversy in the classroom: The democratic power of discussion.* New York, NY: Routledge.

Hillygus, D. S. (2005). The missing link: Exploring the relationship between higher education and political engagement. *Political behavior,* 25-47.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). New York, NY: Guilford Press.

Howell, P. B., Thomas, S., & Ardasheva, Y. (2011). Talk in the classroom: Meeting the developmental, academic, and cultural needs of middle school students. *Middle Grades Research Journal, 6*(1), 47-63.

Iaconelli, R., & Anderman, E. M. (2021). Classroom goal structures and communication style: the role of teacher immediacy and relevance-making in students' perceptions of the classroom. *Social Psychology of Education*, *24*, 37-58.

Ibrahim, D. A., Godfrey, E. B., Cappella, E., & Burson, E. (2021). The art of social justice: Examining arts programming as a context for critical consciousness development among youth. *Journal of Youth and Adolescence,* 1-19.

Inglés, C. J., Martínez-González, A. E., García-Fernández, J. M., Torregrosa, M. S., & Ruiz Esteban, C. (2012). Prosocial behavior and self-concept of Spanish students of compulsory secondary education. *Revista de Psicodidáctica, 17*(1), 135-156.

Iverson, S. V., & James, J. H. (2013). Self-authoring a civic identity: A qualitative analysis of change-oriented service learning. *Journal of Student Affairs Research and Practice, 50*(1), 88-105.

Juuso, H. (2007). *Child, philosophy and education: discussing the intellectual sources of philosophy for children* [Unpublished doctoral dissertation]. University of Oulu, Graduate School of Educational Sciences, Oulu, Finland

Kahne, J. E., & Sporte, S. E. (2008). American educational research. *American Educational Research Journal, 45*(3), 738-766.

Karniol, R., & Shomroni, D. (1999). What being empathic means: Applying the transformation rule approach to individual differences in predicting the thoughts and feelings of prototypic and nonprototypic others. *European Journal of Social Psychology, 29*(2-3), 147-160.

Kawashima-Ginsberg, K. (2012). *Summary of findings from the evaluation of icivics' drafting board intervention*. The Center for Information & Research on Civic Learning and Engagement.

Kester, K. (2009). Education for peace: Content, form, and Structure: Mobilising youth for civic engagement. *Peace & Conflict Review, 4*(2), 1–9.

Kim, S., Lin, T. J., Glassman, M., Ha, S. Y., Wen, Z., Nagpal, M., Cash, T., & Kraatz, E. (2023). Linking knowledge justification with peers to the learning of social perspective taking. *Journal of Moral Education*, 1-21.

Kingsford, J. M., Hawes, D. J., & de Rosnay, M. (2018). The moral self and moral identity: Developmental questions and conceptual challenges. *The British Journal of Developmental Psychology,* 1–15.

Kirlin, M. (2003). The role of civic skills in fostering civic engagement. CIRCLE Working Paper 06. *Center for Information and Research on Civic Learning and Engagement (CIRCLE)*.

Klofstad, C. A. (2010). The lasting effect of civic talk on civic participation: Evidence from a panel study. *Social Forces, 88*(5), 2353-2375.

Krettenauer, T. (2013). Revisiting the moral self construct: Developmental perspectives on moral selfhood. *Self-regulation and autonomy: Social and developmental dimensions of human conduct,* 115-140.

Krettenauer, T., Campbell, S., & Hertz, S. (2013). Moral emotions and the development of the moral self in childhood. *European Journal of Developmental Psychology, 10*(2), 159-173.

Krettenauer, T., & Hertz, S. (2015). What develops in moral identities? A critical review. *Human Development*, *58*(3), 137-153.

Krevans, J., & Gibbs, J. C. (1996). Parents' use of inductive discipline: Relations to children's empathy and prosocial behavior. *Child development*, *67*(6), 3263-3277.

Kolb, D. A. (1983). *Experiential learning: Experience as the source of learning and development.* New York, NY: Prentice-Hall.

Kondracki, N. L., Wellman, N. S., & Amundson, D. R. (2002). Content analysis: Review of methods and their applications in nutrition education. *Journal of Nutrition Education and Behavior, 34*(4), 224-230.

Kuhn, D., Feliciano, N., & Kostikina, D. (2019). Engaging contemporary issues as practice for citizenship. *The Social Studies, 110*(5), 207-219.
Lee, C. D. (2020). The role of public schooling in preparing youth for civic reasoning and engagement. *The Good Society*, *29*(1-2), 90-99.
Lee, C. D., White, G., & Dong, D. (2021). Educating for civic reasoning and discourse. *National Academy of Education.*
Levine, P., & Kawashima-Ginsberg, K. (2015). *Civic education and deeper learning*. Boston, MA: Jobs for the Future.
Levinson, M. (2012). *No citizen left behind.* Harvard University Press.
Lin, T., Ha, S. Y., Chiu, Y., & Hong, Y. (2019). Effects of collaborative small-group discussions on early adolescents' social reasoning. *Reading and Writing, 32*(9).
Lin, T. J., Jadallah, M., Anderson, R. C., Baker, A. R., Nguyen-Jahiel, K., Kim, I. H., Kuo, L-J., Miller, Brian., Dong, T., & Wu, X. (2015). Less is more: Teachers' influence during peer collaboration. *Journal of Educational Psychology, 107*(2), 609.
Lin, T. J., Kraatz, E., Ha, S. Y., Hsieh, M. Y., Glassman, M., Nagpal, M., Sallade, R., & Shin, S. (2022). Shaping classroom social experiences through collaborative small-group discussions. *The British Journal of Educational Psychology,* e12442.
Lipman, M. (2003). *Thinking in Education.* New York, NY: Cambridge University Press.
Littenberg-Tobias, J. (2021). Teaching Citizens: What Can NAEP Civics Tell Us about Active Learning in Civics? *Peabody Journal of Education, 96*(3), 247-260.
Litvinov, A. (2017, March 16). Forgotten purpose: Civics education in public schools. NEA Today. https://www.neatoday.org/2017/03/16/civics-education-public-schools
Lo, J. C. (2017). Adolescents developing civic identities: Sociocultural perspectives on simulations and role-play in a civic classroom. *Theory & Research in Social Education*, *45*(2), 189-217.
Lu, M. S., Martinez, A., Lin, T-Z., Glassman, M., Anderman, E., Ching, K., Nagpal, M., Wen, Z., Tilak, S., Kim, S., Sheng, Y., Cha, W., Yekita., N., Yilun, H. (2023). *Constructing dynamic dialogic spaces through a technology-enhanced social studies curriculum*. American Educational Research Association.
MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. Mahwah, NJ: Erlbaum.
Malin, H., Ballard, P. J., & Damon, W. (2015). Civic purpose: An integrated construct for understanding civic development in adolescence. *Human Development, 58*(2), 103-130.
Malin, H., Liauw, I., & Damon, W. (2017). Purpose and character development in early adolescence. *Journal of youth and adolescence, 46*(6), 1200-1215.
Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology, 38*(1), 299-337.
Martinez A., Croxton, D., Wen, Z., Tilak, S., Ching, K., Gans N., Parrot, J., Lu, M., Nagpal, M., Lin, T-J., Glassman, M., & Anderman, E. (2022). *A Feasibility Study on a Digital Citizenship Curriculum: Navigating the Constraints of COVID-19.* American Educational Research Association.

Matsuba, M. K., Hart, D., & Atkins, R. (2007). Psychological and social-structural influences on commitment to volunteering. *Journal of Research in Personality, 41*(4), 889-907.

McDevitt, M., & Kiousis, S. (2006). *Experiments in political socialization: Kids voting USA as a model of civic education reform* (CIRCLE Working Paper 49). The Center for Information and Research on Civic Learning and Engagement, Tufts University.

McIntosh, H., Hart, D., & Youniss, J. (2007). The influence of family political discussion on youth civic development: Which parent qualities matter?. *PS: Political Science & Politics, 40*(3), 495-499.

Metzger, A., Alvis, L. M., Oosterhoff, B., Babskie, E., Syvertsen, A., & Wray-Lake, L. (2018). The intersection of emotional and sociocognitive competencies with civic engagement in middle childhood and adolescence. *Journal of youth and adolescence, 47*(8), 1663-1683.

Metzger, A., Syvertsen, A. K., Oosterhoff, B., Babskie, E., & Wray-Lake, L. (2016). How children understand civic actions: A mixed methods perspective. *Journal of Adolescent Research*, *31*(5), 507-535.

Metzger, A., & Smetana, J. G. (2009). Adolescent civic and political engagement: Associations between domain-specific judgments and behavior. *Child Development, 80*(2), 433-441.

Michaels, S., O'Connor, C., & Resnick, L. B. (2008). Deliberative discourse idealized and realized: Accountable talk in the classroom and in civic life. *Studies in Philosophy and Education, 27*(4), 283–297.

Milner IV, H. R. (2008). Critical race theory and interest convergence as analytic tools in teacher education policies and practices. *Journal of Teacher Education, 59*(4), 332-346.

Moely, B. E., & Ilustre, V. (2013). Stability and change in the development of college students' civic attitudes, knowledge, and skills. *Michigan Journal of Community Service Learning, 19*(2), 21-35.

National Center for Education Statistics. (n.d.). *What Does the NAEP Civics Assessment Measure?* National Assessment of Educational Progress. https://nces.ed.gov/nationsreportcard/civics/whatmeasure.aspx

Nicotera, N. (2008). Building skills for civic engagement: Children as agents of neighborhood change. *Journal of Community Practice, 16*(2), 221-242.

Niemi, R. G., & Junn, J. (2005). *Civic education: What makes students learn*. Yale University Press.

Oosterhoff, B., Ferris, K. A., & Metzger, A. (2017). Adolescents' sociopolitical values in the context of organized activity involvement. *Youth & Society*, *49*(7), 947-967.

Osorio, S. L. (2018). Toward a humanizing pedagogy: Using Latinx children's literature with early childhood students. *Bilingual Research Journal, 41*(1), 5-22.

Padilla-Walker, L. M., & Christensen, K. J. (2011). Empathy and self-regulation as mediators between parenting and adolescents' prosocial behaviors toward strangers, friends, and family. *Journal of Research on Adolescence, 21,* 545–551.

Pancer, S. M., Pratt, M., Hunsberger, B., & Alisat, S. (2007). Community and political involvement in adolescence: What distinguishes the activists from the uninvolved? *Journal of Community Psychology, 35*(6), 741-759.

Parker, W. C., & Hess, D. (2001). Teaching with and for discussion. *Teaching and Teacher Education, 17*(3), 273-289.

Parker, W. C., Mueller, M., & Wendling, L. (1989). Critical reasoning on civic issues. *Theory and Research in Social Education*, *17*(1), 7–32.

Pasek, J., Feldman, L., Romer, D., & Jamieson, K. H. (2008). Schools as incubators of democratic participation: Building long-term political efficacy with civic education. *Applied Development Science, 12*(1), 26-37.

Patrick, R. B., Bodine, A. J., Gibbs, J. C., & Basinger, K. S. (2018). What accounts for prosocial behavior? Roles of moral identity, moral judgment, and self-efficacy beliefs. *The Journal of genetic psychology, 179*(5), 231-245.

Patrick, R. B., & Gibbs, J. C. (2012). Inductive discipline, parental expression of disappointed expectations, and moral identity in adolescence. *Journal of youth and adolescence, 41*(8), 973-983.

Patrick, R. B., & Gibbs, J. C. (2016). Maternal acceptance: Its contribution to children's favorable perceptions of discipline and moral identity. *The Journal of genetic psychology, 177*(3), 73-84.

Pena-Shaff, J. B., & Nicholls, C. (2004). Analyzing student interactions and meaning construction in computer bulletin board discussions. *Computers & Education, 42*(3), 243-265.

Porter, T. J. (2013). Moral and political identity and civic involvement in adolescents. *Journal of Moral Education, 42*(2), 239-255.

Pratt, M. W., Hunsberger, B., Pancer, S. M., & Alisat, S. (2003). A longitudinal analysis of personal values socialization: Correlates of a moral self-ideal in late adolescence. *Social development, 12*(4), 563-585.

Putnam, R. D. (2000). Bowling alone: America's declining social capital. In Culture and politics (pp. 223-234). Palgrave Macmillan, New York.

Quinn, B. P., & Bauml, M. (2018). Cultivating a mindset of civic engagement among young adolescents. *The Journal of Social Studies Research*, *42*(2), 185-200.

Reeves, T. C., & Okey, J. R. (1996). Alternative assessment for constructivist learning environments. In B. G. Wilson (Ed.), *Constructivist learning environments: Case studies in instructional design* (pp. 191–202). Englewood Cliffs, NJ: Educational Technology Publications.

Reimer, K. S., DeWitt Goudelock, B. M., & Walker, L. J. (2009). Developing conceptions of moral maturity: Traits and identity in adolescent personality. *The Journal of Positive Psychology, 4*(5), 372-388.

Reinders, H., & Youniss, J. (2006). School-based required community service and civic development in adolescents. *Applied Developmental Science, 10*(1), 2-12.

Reznitskaya, A., Kuo, L. J., Clark, A. M., Miller, B., Jadallah, M., Anderson, R. C., &Nguyen-Jahiel, K. (2009). Collaborative reasoning: A dialogic approach to group discussions, *Cambridge Jounral of Education, 39*(1), 29-48. https://doi.org/10.1080/03057640802701952

Roberts, P. (1998). Knowledge, dialogue, and humanization: the moral philosophy of Paulo Freire. *Journal of Educational Thought, 32*(2), 95–117.
Rogoff, B. (1995). Observing sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship. In J. V. Wertsch, P. del Rio, & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 139–164). Cambridge, England: Cambridge University Press.
Rutten, K., & Soetaert, R. (2013). Rhetoric, citizenship, and cultural literacy. *CLCWeb: Comparative Literature and Culture, 15*(3), 1-9.
Scheufele, D. A. (2002). Examining differential gains from mass media and their implications for participatory behavior. *Communication Research, 29*(1), 46-65.
Schmidt, J. A., Shumow, L., & Kackar, H. (2007). Adolescents' participation in service activities and its impact on academic, behavioral, and civic outcomes. *Journal of Youth and Adolescence,* 36, 127-140.
Scott, K. E., & Graham, J. A. (2015). Service-learning: Implications for empathy and community engagement in elementary school children. *Journal of Experiential Education, 38*(4), 354-372.
Sengsavang, S., & Krettenauer, T. (2015). Children's moral self-concept: The role of aggression and parent–child relationships. *Merrill-Palmer Quarterly, 61*(2), 213-235.
Sharp, A. M. (1995). Philosophy for children and the development of ethical values. *Early Child Development and Care*, *107*(1), 45-55.
Sherrod, L. R. (2005). Ensuring liberty by promoting youth development. *Human Development, 48*,376e381. http://dx.doi.org/10.1159/000088256.
Skarmeas, D., Leonidou, C. N., Saridakis, C., & Musarra, G. (2020). Pathways to civic engagement with big social issues: An integrated approach. *Journal of business ethics, 164*(2), 261-285.
Smetana, J. G. & Villalobos, M. (2009). Social cognition development in adolescence. In R. M. Lerner & L. D. Steinberg (Eds.), *Handbook of adolescent psychology: Vol. 1.Individual bases for adolescent development*(3rd ed., pp. 187–228). Hoboken, NJ: Wiley.
Spilt, J. L., Van Lier, P. A., Leflot, G., Onghena, P., & Colpin, H. (2014). Children's social self-concept and internalizing problems: The influence of peers and teachers. *Child development, 85*(3), 1248-1256.
Syvertsen, A. K., Flanagan, C. A., & Stout, M. D. (2007). *Best practices in civic education: Changes in students' civic outcomes* (CIRCLE Working Paper No.57). Retrieved from https://civicyouth.org/PopUps/WorkingPapers/WP57Flanagan.pdf Center for Information and Research on Civic Learning and Engagement (CIRCLE).
Tan, C. (2018). To be more fully human: Freire and Confucius. *Oxford Review of Education, 44*(3), 370-382.
Tellado, I. (2017). Bridges between individuals and communities: Dialogic participation fueling meaningful social engagement. *Research on Ageing and Social Policy 5*(1), 8–31.

Ten Dam, G., Geijsel, F., Reumerman, R., & Ledoux, G. (2011). Measuring young people's citizenship competences. *European Journal of Education*, *46*(3), 354-372.

Tilak, S., Glassman, M., Lu, M., Wen, Z., Pelfrey, L., Kuznetcova, I.,Lin, T-Z., Anderman, E. M., Martinez A., Ching, K., & Nagpal, M. (2023). Investigating social studies teachers' implementation of an immersive history curricular unit as a cybernetic zone of proximal development. *Cogent Education*, *10*(1), 2171183.

Trickey, S., & Topping, K. J. (2006). Collaborative philosophical enquiry for school children: Socio-emotional effects at 11 to 12 years. *School Psychology International*, *27*(5), 599-614.

Van Goethem, A. A., van Hoof, A., van Aken, M. A., Raaijmakers, Q. A., Boom, J., & de Castro, B. O. (2012). The role of adolescents' morality and identity in volunteering. Age and gender differences in a process model. *Journal of Adolescence, 35*(3), 509-520.

Van Goethem, A., van Hoof, A., Orobio de Castro, B., Van Aken, M., & Hart, D. (2014). The role of reflection in the effects of community service on adolescent development: A meta-analysis. *Child development*, *85*(6), 2114-2130.

Vansieleghem, N. (2005). Philosophy for Children as the Wind of Thinking. *Journal of philosophy of education*, *39*(1), 19-35.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.

Vygotsky, L. (1981). The genesis of higher order mental functions. In J. W. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 144–184). Armonk, NY: Sharpe

Waggoner, M., Chinn, C., Yi, H., & Anderson, R. C. (1995). Collaborative reasoning about stories. *Language Arts*, *72*(8), 582-589.

Wen, Z., Lin, T. J., Glassman, M., Kim, S., Tilak, S., Nagpal, M., & Ha, S. Y. (2023). The Development of Early Adolescents' Social Perspective Taking Through Small-Group Discussion. *The Journal of Early Adolescence*, 02724316221149630.

Wentzel, K. R. (2000). What is it that I'm trying to achieve? Classroom goals from a content perspective. *Contemporary educational psychology*, *25*(1), 105-115.

Wentzel, K. R. (2002). The contribution of social goal setting to children's school adjustment. In A., Wigfield & J. S., Eccles (Eds.). *Development of achievement motivation* (pp. 221-246). Academic Press. Hoboken, NJ: Wiley.

Westheimer, J., & Kahne, J. (2004). What kind of citizen? The politics of educating for democracy. *American educational research journal*, *41*(2), 237-269.

White, E. S. (2021). Parent values, civic participation, and children's volunteering. *Children and Youth Services Review, 127,* 106115.

White, E. S., & Mistry, R. S. (2016). Parent civic beliefs, civic participation, socialization practices, and child civic engagement. *Applied Developmental Science, 20*(1), 44-60.

Zaff, J., Boyd, M., Li, Y., Lerner, J. V., & Lerner, R. M. (2010). Active and engaged citizenship: Multi-group and longitudinal factorial analysis of an integrated construct of civic engagement. *Journal of Youth and Adolescence, 39*(7), 736-750.

Zhang, X., Anderson, R. C., Morris, J., Miller, B., Nguyen-Jahiel, K. T., Lin, T. J., Zhang, J., Jadallah, M., Scott, T., Sun, J., Latawiec., Ma, S., Grabow, K., & Hsu, J. Y. L. (2016). Improving children' s competence as decision makers: Contrasting effects of collaborative interaction and direct instruction. *American Educational Research Journal, 53*(1), 194–223.

Zorwick, L. W., & Wade, J. M. (2016). Enhancing civic education through the use of assigned advocacy, argumentation, and debate across the curriculum. *Communication Education, 65*(4), 434-444.

Appendix A. Examples of Discussion and Individual Writing Prompts

Online Discussion and Flipgrid Prompts
History Unit (Native Americans)
4th grade • What advice would you give to the people in charge of deciding whether a pipeline should be built? Why do you think this advice would be helpful? 5th grade • Is there another option Ms. Haaland can recommend that helps both the activists who want to protect the land and the companies who want to help the economy? What should Ms. Haaland tell other government leaders and why?
Economy Unit (Food security)
4th grade • How can businesses like grocery stores support the community and make a profit too? 5th grade • In emergencies like COVID-19, many people bought extra food in case the store ran out, while many others left some behind for their neighbors. What would you do and why?
Individual Writing Prompts
History Unit (Native American)
4th and 5th grade • The U.S. government approved the Dakota access pipeline because they thought it would help the economy. But they broke the treaty because they approved this pipeline before talking to the Sioux, which made them upset. Is it ever okay to break any treaty? If so, when would it be okay and why?
Economy Unit (Food security)
4th grade • Jeannie's brother got sick because nutritious food was not available nearby. Which group (or groups) of people are responsible for making sure that there is nutritious food (as opposed to junk food) available to all? Why do you think that? 5th grade • Myra wants to send a package to help Cheryl since her community is facing food insecurity. Myra asks you for advice. If you could send any two items, what would you send and why?

Appendix B. Multi-dimensional Civic Competencies Coding Scheme Informed by NAEP's (National Assessment Education Progress) Civics Framework

Civic Knowledge Dimension

In this coding section, I identified and categorized "what" students "know" about the social world.

Dimension 1: Civic Knowledge	
Sub Codes	**Definition and Examples**
Political and Government system	Knowledge and understanding of formal government institutions. This includes government functions, types of government (democracy, dictatorship, monarchy, etc.), governmental organizations (e.g., branches of government, local, state, and federal government) and processes (e.g., how to pass a bill), rules and laws including treaties, acts, regulations, citizenship rights, etc.
	e.g., *I also think the **government** is important because they need to make sure the people in their community have food security*
	e.g., ***The government is in control of** businesses and so they need to make it so businesses are selling fresh food, otherwise families like Jeannie's will have a person sick.*
	e.g., *A **treaty** can be used by two or more groups of people, to solve a problem or to agree on something.*
Civil Society	Knowledge and understanding of non-governmental including political (e.g., advocacy organizations), economic (e.g., trade associations, unions), social (e.g., community centers), cultural (e.g., museums), communications (e.g., media) and philanthropic (e.g., charities) organizations; how these institutions collaborate with and influence government; and how these institutions address social issues.
	e.g., *So then Cheryl and others who are doing this **community garden** can send it to others in need of the food and the food can be sent in boxes without the food rotting before it gets there.*
	e.g., *I would try to open a **business** and go for it, so I could help the community.*
	e.g., *On prompt 2, you could add the fact that **grocery stores** can also help the community by offering more than just food.*
Social and Historical Events	Knowledge and understanding of historical and social events including underlying causes, effects and impact, and relevance.

	e.g., *By approving this pipeline the government started a disagreement with the **Standing Rock Sioux tribe** because the pipeline cut under their water supply and through their cultural grounds.*
	e.g., *Eventually, **DAPL** got approved by the government, without the Sioux tribe getting talked to.*
	e.g., *In the **Indian removal act**, the seminoles wouldńt have enough space to get water and plant a lot of crops.*
Social Issues	Knowledge and understanding of social issues that the government and civil society try to address.
	e.g., *That is a lot of people that need help with **food security** and will get really sick and maybe even die without help.*
	e.g., *I disagree with prompt 2 because **a lot of people don't have jobs** and need them to get food for their families so if 12,000 jobs were presented, it would be amazing for many people that they now have a chance of getting a job.*
	e.g., *I'll explain that the pipeline is good because it will help manufacturers like transport oil and manufacture oil a lot and bad because **it will ruin the environment if it leaks.***
Economics	Knowledge and understanding of economic concepts such as supply and demand, scarcity, profit, saving, costs, etc.
	e.g., *They will have to decide on whether to **spend money** on food or on medical help.*
	e.g., *It is also important because the **amount of money people would spend determines how much profit you get** and how much you can pay your employees.*
	e.g., ***Many neighborhoods do not have enough grocery stores** but grocery stores do not open in these areas because **they think they will not make enough profit to stay open.***
International Affairs	Knowledge and understanding of how countries relate and interact with each other, globalization, global conflicts, movement of peoples, international organizations, and agreements
	e.g., *As an example, if **three countries** agreed to give each other the resources they did not have.*
	e.g., *Another reason people think that the pipeline would be helpful, is because it would help the US become **less dependent on other countries** for oil.*
	e.g., *For example, **if you used to live in China and you moved to America,** you would probably still want to eat some cultural foods so that you can keep following certain traditions that you had in China.*
N/A	Not involving any identified civic knowledge

	e.g., *I also think that if the other side is not okay with it you can't do it unless you think it will cause a really big problem.*
	e.g., *And if you would do that, then it's basically just tearing up what's theirs.*
	e.g., *I had the mostly same ideas for my Flipgrid.*

Civic Skills Dimension

In this coding section, I identified and categorized "how" students "express" what they know about the social world.

Dimension 2: Civic Skills	
Sub Codes	**Definition and Examples**
Explaining/ Elaborating	Providing personally interpreted descriptions on something; Being able to connections between different concepts or principles to demonstrate one's understanding.
	e.g., ***For example,*** *make the high-tech lunch system not cost money or have it cost money but about 5 cents every meal.*
	e.g., *but* ***what I mean by that*** *is make the high-tech lunch system fairer.*
	e.g., *if you break a peace treaty* ***that means*** *you will make enemies*
Positioning	Being able to decide on one's position and clearly state one's thought.
	e.g., ***In my opinion*** *the school* ***should*** *keep the high-tech lunch system*
	e.g., ***The Government should*** *ask the Native Americans if they can change the treaty or break it.*
	e.g., *Sometimes,* ***it is okay to break a treaty*** *if you have talked to the people you are making the treaty with.*
Justifying	Connecting and providing relevant examples, evidence, and facts as a way to support one's position.
	e.g., *I would leave some things behind* ***because*** *I would only need enough to support me during the pandemic.*
	e.g., *I think this* ***because*** *the government is in charge of the entire state so it is their job to protect it.*
	e.g., ***One reason*** *they are responsible for this is* ***because*** *just like the grocery store owners they are expected to have fresh food, and enough of it!*
Hypothetical reasoning	Reasoning upon alternative situations, flipped side of a standpoint, etc.

	e.g., ***What if*** *you want something different other than food that you are getting every single day?*
	e.g., ***Without*** *the government's permission,* ***many poor people would*** *not be able to receive the food they need.*
	e.g., ***If*** *they are not stocked well enough then some people can get food,* ***whereas others*** *who may need it more have no access to free food.*
Causal reasoning	Reasoning upon corresponding actions in consideration of the results, outcomes, and consequences held on others/communities; Being conscious about the effect of phenomena and the cause.
	e.g., *I believe that* ***this could cause*** *bad feelings revolving around you.*
	e.g., *I would have to keep some of it to myself* ***so that I can*** *help the community and my family/fam.*
	e.g., *And the animals that eat the herbivores* ***might die from*** *eating the herbivores, and so on.*
Referencing	Referencing existing knowledge, information, source; Being able to expand and corroborate one's standpoint by mentioning any source.
	e.g., ***A saying that goes along with*** *this is, "You got go slow so you can go fast later.*
	e.g., ***Remember the example*** *of that man who ran such a huge grocery store in a food desert?*
	e.g., *Because it's like the saying saying,* ***I scratch your back, you scratch mine,*** *like a good version of* ***karma*** *if you help them and then you get help.*
Praise	Showing a positive reaction and encouragement to others
	e.g., ***I like when you elaborated*** *by some fact you told you did not just say the fact and be done you elaborated on the fact that you told.* ***Good job!***
	e.g., ***I loved how you explained*** *what you would do in your opinion*
	e.g., ***That was my favorite part!***
Expanding	Being able to make connections between others' viewpoints or reasoning with their own, contributing to the expansion of ideas (e.g., showing either agreement or disagreement to peers' opinions with added thoughts)
	e.g., ***I also very much agree with the reason*** *to be nice if another student's feeling bad or having a bad day, but I think we should always be extra nice to everybody always, not just when they are feeling bad.*

	e.g., ***I agree with you if*** *the water is not clean people will die of thirst and they will get sick.*
	e.g., *I* ***respectfully disagree with you*** *because if we don't like change some holidays some people might get mad and most of the cultures don't make any sense to me*
Asking for clarification	Being able to identify what they do not understand, acknowledge that they need more input or clarification, and ask the counterpart to elaborate or provide further information
	e.g., *I think that* ***you could elaborate more on*** *both Prompts and add more reasoning.*
	e.g., *It would have been nice* ***if you said more reasonings*** *for your part one and two.*
	e.g., *But I think* ***you should have added more*** *pros and cons.*
Simple dis/agreement	Showing agreement or disagreement which does not seem 'expanding' the original ideas.
	e.g., ***Exactly!***
	e.g., ***I agree.***
	e.g., ***I don't think so.***
N/A	Not involving any identified civic skills
	e.g., *sry :(*
	e.g., *So thank you bye*
	e.g., *That's it for day everyone.*

Civic Dispositions Dimension

In this coding section, I will identify and categorize which "orientations" "motivate and base" students' reasoning and discourse.

Dimension 3: Civic Dispositions	
Sub Codes	**Definition and Examples**
Empathy (empathetic)	Being able to identify, understand or empathize with others' emotional experiences.
	e.g., ***I feel bad*** *for the Sioux.*
	e.g., ***Sadly****, when the Dakota Access Pipeline had started, its path was right through the sacred lands and burial grounds of the native people.*
	e.g**.,** ***I do feel for*** *the government because they did feel sorry for not talking about it and breaking the honorable treaty.*
Perspective taking (considerate)	Being cognizant of others' viewpoints, status, situations, and experiences; Considering the effects of a certain action held on other people
	e.g., ***Imagine*** *signing something that is an agreement that should not be broken.*

	e.g., ***The Settlers needed the land*** *for farming and to let America advance, so they still went to that land and pushed the Native people from there too.*
	e.g., ***The government's point of view*** *is reasonable because there are pros but there are also cons.*
Self-transcendence (prosocial)	Being willing to provide assistance for others; Valuing helping actions; Believing that promoting others' well-being is a shared concern
	e.g., *And with all the stuff you don't really need* ***you can leave for the people who actually need the supplies.***
	e.g., *Lastly* ***you could help the community be better*** *and try to help and also do new things so they can get to know more people.*
	e.g., ***I would probably take the canned food and donate it to*** *a homeless shelter or food drive.*
Social capital (open-minded)	Being willing to learn and embrace diversity (different people, cultures); showing a positive attitude toward people from different backgrounds and conditions
	e.g., *You could help your community members by* ***adding multicultural foods***
	e.g., *And then I give 50% of it to Kentucky because* ***there's a lot of people that*** *like* ***don't have*** *homes,* ***don't have*** *electricity or water, they could really use some food right now.*
	e.g., *In my opinion, I think they can have like* ***different cultural foods, say like, you're from India,*** *and you just moved to America, you (wouldn't) just want to eat American food, you would want to have like your own food.*
Respect for human dignity (respectful)	Valuing the human basic rights; Being willing to advocate for the underrepresented or minority
	e.g., *I think this because* ***everybody should be able to have the right foods.***
	e.g., *So then they can have a healthy or, or a good life so* ***that they can continue to live.***
	e.g., *And the second thing I'm addressing is um what I tell would tell the workers I would tell them* ***it's like disrespectful*** *because there's artifacts and burial sites that are important um to the tribe.*
Critical consciousness (critical)	Having an awareness of a problem; Identifying specific deficits of a system
	e.g., ***It was unfair for the people who*** *liked standing rock because they did not agree with the pipeline going through standing rock.*

	e.g., *And I would tell them that because well,* ***what they're doing right behind me is unkind, unfair, and unnecessary.***
	e.g., *But you can break one when it is a bad treaty cause* ***you can not say okay when it is a bad*** *treaty and go do it.*
Responsibility (Responsible)	Thinking of required actions or desired ways of behaviors as citizens; Assuming one's personal, political, and economic responsibilities of a citizen; participate in civic affairs in an informed, thoughtful, and effective manner
	e.g., *Also,* ***I will*** *give Cheryl beans because* ***it will help the environment*** *too*
	e.g., ***It could damage some things*** *if they go to the water and leaks, it would be* ***bad because um habitats would die*** *that that was in the uh oil and I would tell them that (they should go back to the paths.*
	e.g., *A different option is canceling the oil mining and* ***using a natural resource*** *like solar energy.*
N/A	Not involving any identified civic dispositions
	e.g., *I think it is not okay to break any treaty.*
	e.g., *And I have two questions to answer.*
	e.g., *I agree with your response.*

Appendix C. Self-Concepts and Civic Purpose Surveys

Social Self-Concept: Self-Perception Profile for Children

Read the following statements and mark how much each statement describes you. (5 Likert: Not at all like me, Not much like me, Somewhat like me, Mostly like me, Very much like me)

1. I have many close classmates
2. I know how to make friends
3. I understand what makes peers to accept me
4. I think I am popular
5. I have social skills to make friends

Moral Self-Concept: Moral Self-Relevance Measure

Please tell us how important these following characteristics are to 'who you are' as a person. These characteristics may or may not describe you, so feel free to let us know how much you think these are important to yourself.

(5 Likert: Not important, Sort of important, Important, Very important, Extremely important)

1. How important is it to you that you are **creative** or **imaginative**?
2. How important is it to you that you are **considerate** or **courteous**?
3. How important is it to you that you are **careful** or **cautious**?
4. How important is it to you that you are **honest** or **truthful**?
5. How important is it to you that you are **outgoing** or **sociable**?
6. How important is it to you that you are **kind** or **helpful**?
7. How important is it to you that you are **athletic** or **agile**?
8. How important is it to you that you are **understanding** or **sympathetic**?
9. How important is it to you that you are **funny** or **humorous**?
10. How important is it to you that you are **generous** or **giving**?
11. How important is it to you that you are **logical** or **rational**?
12. How important is it to you that you are **sincere** or **genuine**?
13. How important is it to you that you are **independent** or **self-reliant**?
14. How important is it to you that you are **fair** or **just**?
15. How important is it to you that you are **active** or **energetic**?
16. How important is it to you that you are **responsible** or **dependable**?

Civic Purpose

Civic intention *subscale*

Thinking about your future, how meaningful are the following goals in your life?

(5 Likert: Not at all meaningful, Not very meaningful, Sort of meaningful, Meaningful, Extremely meaningful)

Malin et al., 2017	In the current study
Volunteer: item remains same	
1)Making a difference through volunteering →	*(same) Making a difference through volunteering*
Leadership: elaboration was added	
2)Becoming a leader in my community →	*(same) Becoming a leader in my community who can help other people*
Positive change: item was changed with a specification of money investment	
3)Making positive changes in my community →	*(changed) Spending money for important societal issues like helping the less fortunate*
Impact on social issues: abstract expressions were specified, and 'expression'(voicing up) component as added	
4)Having an impact on a social cause or issue that is important to me →	*(changed) Voicing up to fix any problems in society*
Politics: examples were added	
5)Being involved in politics →	*(same) Participating in political activities like voting, campaign, or protests*

Civic motivation *subscale*

People have different reasons for doing different things. During the past few weeks, think about why you have been involved in civic activities like "community service" "helping neighbors" "giving money to the homeless" "expressing your thoughts about current events." etc.

If you don't have experiences yet, think about why you would do these activities in the future. Tell us how important these following reasons to you when doing civic activities! (5 Likert: Not at all important, Not very important, Sort of important, Important, Extremely important)

Malin et al., 2017	In the current study
Beyond the Self Motivations	
1.To do something about an issue I care about. →	(same) To do something about an issue I care about.
2.I wanted to take action on my beliefs. →	(same) To take action on my beliefs.
3.I wanted to be the kind of person who helps others. →	(same) To be kind of person who helps others.

4.I've been given a lot; I want to give back. →	(same) To give back what I have been given.
5.I became upset by something I saw happening. →	(changed) To improve the lives of other people.
6.It is important for my religious/ethnic/cultural group.	(not used)
Self-Oriented Motivations	
1.It is required at school. →	(same) To fulfill school's requirement.
2.It makes me feel good about myself. →	(same) To feel good about myself.
3.To further my educator or career goals.	(not used)
4.Somebody asked or encouraged me to participate. →	(same) To follow my parents' or teachers' suggestions.
5.To build skills or prepare for the future. →	(changed) To make friends or create connections with other people
6.It sounded fun. →	(changed) To look cool.

Civic actions *subscale*

Please share how often you participated in each of the following activities in the past few weeks! It is totally fine that you respond honestly!

(4 Likert: Never, One time, Twice, More than twice)

Malin et al., 2017	In the current study
Held a leadership position in a school club →	(same) Played a leadership role in any of the activities in school
Volunteered with a community service organization →	(same) Volunteered with a community service organization
Gave money to a cause	(same) Donated money or other things to people who are in need
Used art, music, or digital media using art, music, or digital/social media to (art/graffiti/music/spoken word/dance/videos/rap) to express my views about political or social issues.	(same) Expressed my views about political and social issues using arts, music, social media, or text
	(added) Searched for information about social or political topics on the internet or blogs
	(added) Discussed current events or societal issues with my friends or my family