THE YOUTH RESEARCH HUB: EXPLORING ONLINE SOCIAL NETWORKS

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ABSTRACT

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Youth today are less likely to engage in civic life compared to past generations (Flanagan & Levein, 2010). These disparities are even further exacerbated when examining the intersections of race, ethnicity, and socio-economic background (Caprini, 2004). Youth Participatory Action Research (YPAR) is one approach for enhancing youths' civic engagement, by engaging them as crucial partners in the action research cycle. YPAR has been identified as a noteworthy strategy for promoting civic participation, and tackling structural inequities. Because of its emphasis on social justice, YPAR is an especially promising approach for youth who experience racism, and other forms of marginalization. However, YPAR remains the exception rather than the standard, with these projects often existing in isolation. Efforts to scale-up YPAR practices highlight the potential as a promising strategy for combatting disparities in civic participation. This dissertation examines an online platform, connecting three distinct YPAR project groups (N = 54). This study employs a mixed-method design (social network analysis, and qualitative interviews) to (1) explore changes within the online communication network throughout different stages of the YPAR project, and (2) identify key network and demographic predictors in predicting students' frequency in overall utilization of YPAR practices. Network and qualitative findings suggest that online platforms have promise in diversifying traditional online networks as the project progresses (particularly in the social action stage), and highlight the critical role of communication partners' behaviors on students' utilization of YPAR

practices. Additionally, implications for tackling disparities in civic participation, providing additional opportunities for dissemination, and larger scale setting level organizing are discussed.

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Chapter One: Examining Disparities in Civic Participation

Civic participation consists of actions at the individual or group level directed towards issues of public concern (Caprini, 2014). Civic participation includes joining organized groups in the community, volunteering, or leading grass roots social change efforts (Flanagan & Levine, 2010). Providing all individuals with an equal opportunity for civic participation is crucial for a democratic society (Camino, 2000). Communities thrive in environments that provide diverse channels for civic participation (Camino & Zeldin, 2002; Minkler, Blackwell, Thompson, & Tamir, 2003; Putnam, 1995).

In the United States, there are drastic race, income, and gender disparities in civic participation (American Political Science Association: Task Force on Inequality and American Democracy [APSA], 2004; Hyman & Levine, 2008; Kahne & Sporte, 2008). These disparities produce inequalities in political voice, power, and influence. In other words, governing institutions privilege the needs of those with higher incomes, in comparison to those living in poverty (Hyman & Levine, 2008). In particular, those who enjoy professional and occupational success and whom have often also achieved higher levels of education, are most likely to be civically engaged, making their opinions, needs, and political values known through the receptive ears of government officials (APSA, 2004). In 2010, only 26.7% of citizens earning less than $10,000 voted, while 61.6% percent of those making $150,000 or more voted (Bass & Casper, 2011). In a similar vein, when engaging in local community efforts, 38% of those earning above $75,000 engage in local organizing, compared to 13% of those whom earned under $15,000 (APSA, 2004). Those who are politically active tend to have more self-assurance with communication as well as their ability to take on leadership roles in social change efforts (Kahne & Sporte, 2008). Therefore, the needs and values of those living in poverty, as well as

those employed through the labor force (e.g. service industry, blue collar jobs, etc.), racial and ethnic minorities, and immigrants are less likely to be heard (APSA, 2004).

When discussing the construction of a pipeline for promoting equitable civic participation for younger generations, researchers have identified a worrisome trend (Caprini, 2014; Flanagan & Levine, 2010). Youth today are less likely to engage in civic life compared to older generations (i.e. their parents or grandparents) (Caprini, 2014; Flanagan, 2008; Flanagan & Levine, 2010; Watts & Flanagan, 2007). Flanagan and Levine (2010) noted that youth today are less likely than youth active in the 1970s to exhibit 9 out of 10 key characteristics, which they identify as critical components of active citizenship. These characteristics include "belonging to a group, attending a religious organization, voting, being contacted by a political party, working on a community project, attending a club meeting, and believing people are trustworthy" (pg. 161). Additionally, the Center for Information and Research on Civic Learning and Engagement's 2011 (CIRCLE) report (Zaff, Kawashima-Ginsberg, & Linn, 2011) asserts that in 2010 over one-fifth of the youth population (23.2%) were civically alienated, a notable 6.2% increase from 2008. Employing a developmental perspective, late adolescence is a critical period, when civic activity, social values, and political beliefs emerge (Flanagan, 2008; Flanagan & Tucker, 1999). Youth are more likely to become civically engaged when they are in environments that foster opportunities to support and grow their knowledge in regards to critical social issues, as well as strategies in social change and action (Flanagan, 2008; Flanagan & Levine, 2010; Kahne & Sporte, 2008). Yet, research indicates an expanding socioeconomic divide, paralleling adult populations, in which youth have unequal access to activities that help them develop cumulative experiences and skills in civic participation (Flanagan, Cumsille, Gill, & Gallay, 2007; Flanagan & Levine, 2010; Flanagan & Watts, 2007; Hoban, Kirby, Barrios, &

Kei, 2009). Specifically, compared to their less privileged peers, students from socioeconomically advantaged upbringings have greater access to school supports (i.e. government class, civics courses, etc.), and extracurricular activities (i.e. afterschool programs, community-based organizations, etc.) that provide opportunities to enhance their skills and experiences in civic participation (Flanagan & Levine, 2010; Kahne & Middaugh, 2008; Kahne & Sporte, 2008). Thus, an increasing number of less privileged youth are being defined as civically alienated (i.e. not engaged in their community, active in discussing politics, or participating in political activities) (Delli Carpini, 2000; Keeter, Zurkin, Andolina, & Jenkins, 2002; Pasek, Kenski, & Romer, 2006, Zaff & Kawashima-Ginsberg, 2011). Kahne and Middaugh (2008) conducted a survey consisting of 2,366 twelfth grade students from 12 schools throughout California. Results indicated that African American students reported having fewer civic-oriented government classes and current event discussions than their Caucasian peers. Latino students reported fewer opportunities to participate in community service than Caucasian students. Furthermore, the CIRCLE 2010 report found youth whom were identified as "civically alienated" overwhelmingly represented marginalized groups, for instance, 38.6% were Latino, and 52.9% were non-US citizens.

An equally troubling concern is that a lack of engagement in one's primary settings (i.e. communities, schools, organizations, coalitions, and neighborhoods) is associated with poor developmental outcomes (Flanagan, 2008; Flanagan & Levine, 2010, Yates & Youniss, 1996). For instance, research examining youth primarily in the United States[1], ranging from ages twelve to twenty-four years old, found low engagement was associated with limited civic knowledge (Hart, Atkins, & Ford, 1998), low self-efficacy (Giles & Eyler, 1994), and greater discomfort in

[1] Yates and Youniss (1996) reviewed 44 studies 95% were conducted in the United States.

resolving interpersonal conflict (Flanagan & Levine, 2010; Yates & Youniss 1996), as well as an increased sense of hopelessness (Bolland, 2004). Furthermore, nonparticipation in one's school or community can foster feelings of alienation and low social capital (Flanagan & Levine, 2010), a prominent risk factor for negative outcomes such as loneliness, depression, drug use, school failure, and juvenile delinquency (Benard, 1991).

Efforts Promoting Youth Civic Participation and Development

Attempts to promote youth civic engagement and participation in their local environments emerged in the mid-1980s to the 1990s in the areas of positive youth development (PYD), community youth development (CYD), sociopolitical development (SPD), youth organizing, and youth participatory action research (YPAR) (Camino & Zeldin, 2002; Checkoway & Richards-Schuster, 2003; Fine, 2009). These strands overlap in several areas: viewing young people as assets rather than problems (i.e. deficits), enforcing the critical role of supportive adult allies and equitable partnerships, as well as identifying opportunities for young people to take on leadership roles within their primary settings (Camino & Zeldin, 2002; Checkoway & Richards-Schuster, 2003; Fine, 2009).

Positive youth development (PYD) was the earliest framework to emerge, and emphasizes the importance of programs and services in enhancing young people's competencies in social, emotional, behavioral, and cognitive domains. PYD reinforces the need for a comprehensive approach in preventing negative outcomes by both attending to and bolstering protective factors (i.e. caring/supportive adults, positive peers, high self-esteem etc.) Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). PYD has identified an array of best practices (e.g. promoting bonding, resilience, etc.) through meta-analyses (Catalano et al., 2004), examining trends in longitudinal data sets (Lerner et al., 2005), as well as employing innovative mixed-

method designs (Edwards & Lopez, 2006). While PYD has generated a larger body of empirical evidence, critics have argued that the approach does not take into account contextual conditions (e.g. poverty, violence, experiences of discrimination), which can also hamper the life course trajectories of young people (Watts & Flanagan, 2007).

Community youth development (CYD) builds off PYD by expanding the focus from key programs and practices to community wide initiatives, in which researchers and practitioners partner with a community-based organization or institution (i.e. schools, city council, etc.) to provide youth with opportunities to build relations, as well as develop skills in leadership through real-world application (Perkins, Borden, Keith, Hoppe-Rooney, & Villarruel, 2003; Viallaruel, Perkins, Borden, Keith, 2003). Examples of such opportunities include youth serving on city council advisory boards (Camino, 2000; Camino & Zeldin, 2002), engaging in community restoration efforts, and or conducting community-wide evaluations (Checkoway, Dobbie, & Richards-Schuster, 2003). Findings from CYD have been primarily qualitative, encompassing exploratory ethnographic case studies (Libby, Rosen, & Sedonaen, 2005; Mitra, 2009; Zeldin, Petrokubi, & MacNeil, 2008), or personal reflections form the field (Camino, 2005), and key informant interviews (Zeldin, 2004; Zeldin et al., 2008). However, recent efforts have involved the construction of quantitative measures of youth participation and voice (Zeldin, Christens, & Powers, 2013), as well as the identification of promising quantitative trends among larger samples regarding the role of youth voice in predicting young peoples' sense of empowerment and community connectedness (Christens, Zeldin, & Krauss; *under review*; Krauss, Zeldin, & Gauley; *under review*). Although CYD has generated a growing and evolving body of empirical evidence, critics have argued that the approach does not account for disparities

in youth's access to opportunities to engage in experiences that build leadership skills and promote civic participation (Watts & Flanagan, 2007).

Socio-political development SPD diverges from PYD and CYD in that it places particular emphasis on engaging youth who have experienced historic marginalization or discrimination in their schools and communities (see exception, Stoudt, 2009). SPD focuses discussion on issues of power and privilege through the application of a social justice and activist lens (Cammarota & Romero, 2011). SPD efforts aim to enrich young peoples' conceptualization for how their experiences are rooted within a larger political systems and foster social change strategies that challenge these systems of oppression (Cahill, 2007; Cammarota & Romero, 2011; Diemer & Hsieh, 2008; Diemer, 2009; Diemer & Blustein, 2006; Friere, 1970; Smith, Davis, & Bhowmik, 2010; Watts, Griffith, Abdul-Adil, 1999; Watts & Flanagan, 2007; Watts et al., 1998). SPD initiatives have focused on developing elective school courses and afterschool programs creating a critical space for marginalized students to explore their cultures' history in relation to systematic discrimination (Cammarota & Romero, 2011; Watts et al., 1999). While this field is relatively new, with researchers still developing methods for examining the long-term benefits of engaging young people in sociopolitical efforts, recent studies have indicated promising advances in scale development (Diemer, Rapa, Catalina, & Perry, 2014), and yielded findings regarding the role of sociopolitical development in predicting long-term outcomes such as career aspirations (Diemer & Hsieh, 2008; Diemer, 2009; Diemer & Blustein, 2006) as well as academic success (i.e. graduation, passing high school exit exams) (Cabrera, Milem, Jaquette, & Marx, 2014).

Youth organizing consists of educating youth in the principles and tactics of community organizing to spur larger institutional change (Christens & Dolan, 2011). Youth organizing is

greatly informed by SPD, with its focus on exploring the root cause of social inequities (e.g. poverty), and how power functions to uphold current conditions (e.g. discriminatory policies) (Watts & Guessous, 2006). Youth organizing pulls from community organizing models utilized by adult populations (Alinsky, 1989). Youth organizing differs from other forms of youth engagement. Notably, in youth organizing there is a heavy focus on youth learning to collectively work together, and identify ways to strategically employ their power as a group entity (Christens & Dolan, 2011). Youth organizing efforts also focus on promoting youths' voice in selecting issues that they define as the most relevant to their generation or local community (Speer, 2008), as well as taking the lead in spearheading action strategies that promote social change (Share & Stakcs, 2006). However, the holistic impact of youth leading community organizing initiatives remains unclear as most efforts focus on the individual rather than the larger outcomes at the setting or community level (Christens & Dolan, 2011; Conner, Zaino, & Scarola, 2012). Research has begun to identify youth organizing efforts as having a beneficial impact on key or influential adults such as partnering adult allies, educational administrators, and appointed government officials (Christens & Dolan, 2011; Conner et al., 2012; Zeldin, Petrokubi, & Camino, 2008).

Youth participatory action research (YPAR) is a form of Community-Based Participatory Research (CBPR), which emphasizes youth leading or being active partners in the research process. YPAR stresses the perspective of youth through the process of critical inquiry and social action (Fine & Torre, 2004; Langhout & Thomas, 2010). YPAR confronts traditional research paradigms by intentionally democratizing the research process (Fine, 2009). This is conducted by recognizing the expertise of those whose lived experiences guide the action research process (Fine & Torre, 2004; Kohfeldt, Chhun, Grace, & Langhout, 2011; Langhout & Thomas, 2010).

In YPAR, youth identify social problems they aspire to improve in their schools and local communities. To identify their issue, youth first conduct research within their primary environment (i.e. schools, and communities), and then utilize their findings to inform plans for social action and change. The YPAR process can be separated into four phases: (1) problem identification, (2) data collection, (3) data analysis, and (4) social action. Within the problem identification stage, youth critically explore their local settings, locate a particular social issue or problem of interest, generate specific areas of inquiry (e.g. research questions, and hypotheses), and develop a study design. The data collection stage consists of creating research tools (e.g. interview protocols, surveys, etc.), and gathering information (e.g. conduct observations, focus groups, photovoice etc.). The data analysis stage encompasses examining the data, and identifying prevalent findings and themes across diverse sources and/or perspectives. Lastly, the action stage involves translating the research findings to inform strategic social action which attend to the problem at hand (Phillips, Berg, Rodriguez & Morgan, 2010). YPAR differs from other youth engagement models in that it is a method for conducting research, as well as a theoretical paradigm. Furthermore, YPAR offers a diverse range of benefits at various levels (i.e. individual, relational, and setting levels) (See further details below). YPAR overlaps with a diverse range of youth engagement models (e.g. PYD, CYD, SPD, & Youth Organizing), and thus has the potential to receive the benefits of each.

With respect to PYD, YPAR was identified as a promising practice with which to promote youths' skill development including: increased communication skills (Ozer & Douglas, 2013), leadership (Christens & Kirshner, 2011), interpersonal social skills (Kirshner et al., 2011), friendship formation (Flores, 2007), and critical thinking (Foster-Fishman et al., 2010). These findings have been identified through a variety of methods such as self-report surveys (Ozer &

Douglas, 2013), qualitative interviews (Kirshner et al., 2011), photovoice focus groups (Foster-Fishman et al., 2010), and ethnographic case studies (Flores, 2007). Furthermore, YPAR has also been utilized as a method for youth to participate in conducting needs assessments, and identifying potential areas of improvement within youth development programs (Chen et al., 2010).

Regarding CYD, YPAR was identified as having the ability to push beyond youth's positive development at the individual level to foster collaborative interactions among diverse youth belonging to a variety of racial, ethnic and socio-economic backgrounds (Flores, 2007). Qualitative interviews and exemplary ethnographic case studies also highlight the opportunity for the supportive formation of relationships between youth and adults (Mitra, 2004, 2008, & 2009; Zeldin, 2004; Zeldin, Camino, & Mook, 2005). Notably, youth can increase their social capital by developing intergenerational ties with community leaders and local residents. These relations could potentially result in future employment opportunities (London & Zimmerman & Erbstein, 2003; Rubin & Jones, 2007). Additionally, these studies highlight that YPAR initiatives have the potential to influence adults as well, by providing them with opportunities to strengthen their skills in group facilitation and social justice organizing (Mitra, 2008). Several studies have identified the specific benefits for teachers and educational administrators, such as improving instruction, curriculum, and classroom management practices (Mitra, 2008/2009; Ozer & Wright, 2012).

YPAR also has the potential to enhance setting level changes within the community. Case studies have found that new leadership opportunities present themselves for youth who participate in YPAR, including the chance to serve on city councils, boards of organizations and schools, as well as providing input on school curriculum, governance, or other educational

policies (Chen et al., 2010; Foster-Fishman et al., 2010; Ozer & Wright, 2012; Stoudt, 2009; Wernick, Woodford, & Siden, 2010; Zeldin et al., 2008). Research has noted that when students present their findings to critical adult decision makers, their presentations can showcase youths' valuable insight and expertise on pertinent issues (Chen et al., 2010; Foster-Fishman et al., 2010; Stoudt, 2009; Zeldin et al., 2008). Thus, youths have the potential to sway perceptions regarding the importance of including youth input in decision-making (Zeldin et al., 2008). In one example, Foster-Fishman and colleagues (2010) observed that after watching youth provide a resource guide (generated from the results of their action research project) to various local organizations, leaders within the organization were so impressed that they decided to partner with the youth, conducting a series of strategic planning sessions focused on increasing youth engagement in their local community.

In-depth ethnographic and qualitative case studies have noted the potential for YPAR to push youth beyond critical thinking into sociopolitical identity development as well as into developmentally rich domains of civic participation, and political awareness (Cammarota & Fine, 2008; Stoudt, 2009). YPAR has also been associated with growth in critical consciousness and civic engagement (Cahill, 2007; Cammarota, 2011; Foster-Fishman et al., 2010; Ozer & Wright, 2010; Smith et al., 2010; Watts et al., 1999; Watts & Flanagan, 2007; Watts et al., 1998). As youth critically explore the every day events within their own lives through the action research cycle, they identify how their own experiences are embedded within a larger political system and hierarchies of power (Cahill, 2007; Fine & Torre, 2004; Kohfeldt et al., 2011; Langhout & Thomas, 2010; Zimmerman, 2000). When youth identify asymmetries in power, they renegotiate their own roles as active agents of social change who can mobilize, and critically push boundaries against existing institutional structures (Dworski-Riggs, D., &

Langhout, 2010; Watts et al., 1999). For example, Cammarota (2011) conducted an ethnographic case study examining students' critical growth in assessing the inequities experienced by Latino(a)s in their school environment (specifically the limited resources and supports provided to recent immigrants). Students first developed critiques through personal exploration within their own school environment (i.e. field notes constructed into poems). They then extended to social interactions and inquiry with the student body (i.e. through photography, and gathering accompanying student narratives). Findings eventually resulted in social change strategies (i.e. pressing the administration for structural change providing supports for recent immigrants students).

Lastly, YPAR has been conceptualized and paired with various youth organizing endeavors (see Fox et al., 2010; Christens & Dolan, 2011), in which young people first go through the action research process to strategically and systematically locate a pressing social need within their communities (Fine, 2009; Christens & Dolan, 2011). The action stage of the YPAR process (fourth and final stage) is viewed as a leverage point to guide and inform community organizing and advocacy efforts (Fox et al., 2010).

While there is currently limited empirical support for YPAR reducing race or socioeconomic disparities in civic engagement, Ozer and colleagues (2013) did find that students taking a YPAR school elective course indicated an increase in sociopolitical skills and a motivation to influence their schools and communities. They also found that these students exhibited participatory behaviors consistently across racial and ethnic backgrounds when compared to students taking more traditional leadership classes. Furthermore, YPAR efforts have historically focused on providing civic opportunities for youth whom have experienced racism or other forms of marginalization within their schools and communities (Cahill, 2007; Cabrera et al.,

2014; Cammarota & Romero, 2006 & 2011; Fine & Torre, 2004; Kirshner, 2009; Mirra et al., 2013). These efforts have identified beneficial outcomes for marginalized youth in their engagement as social change agents, particularly, an increased desire for remaining civically active and engaged (Cahill, 2007; Cabrera et al., 2014; Cammarota & Romero, 2006 & 2011; Mirra et al., 2013; Ozer & Wright, 2013). Thus, these studies illustrate the promise that YPAR approaches have in equalizing opportunities for civic participation across race and socioeconomic class.

In sum, engaging in YPAR can promote benefits across a variety of youth engagement models, and can connect different youth engagement approaches. For instance, engaging in YPAR can enhance youths' development (e.g. critical thinking skills, and leadership) attending to the aims of PYD, and has the potential to offer unique opportunities for youth voice and participation in change efforts reflecting the objectives of CYD. Furthermore, YPAR provides a frame for exploring social issues of power and inequity by engaging in action research in line with the values of SPD. It also offers unique insights for strategic social action, encompassing the major objectives of Youth Organizing. Thus, YPAR can offer a unique approach to developing a multifaceted program that has the potential to reap the benefits and aims of various youth engagement approaches.

Scaling Up YPAR Efforts

Despite the benefits described above, YPAR remains the exception rather than the standard. YPAR projects tend to exist in isolation. For example, these projects tend to involve one group of youth in one particular school, program, or coalition. Now that the field is more established, there are discussions on how to connect these various YPAR groups and expand efforts to a larger scale (Ozer, Petrokubi, & Zeldin, 2013). Large-scale efforts can provide

organizing infrastructures to coordinate civic activity across multiple sites, further pushing youth perspectives, engagement, and voice from the margins to the center of research, policy, and the settings they inhabit. Notably, organizing and planning for civic activity can now take place online (Raynes-Goldie & Walker, 2008). The Internet is a routine aspect of our lives. This is particularly the case for youth. The PEW Research Center (2013) found that 95% of youth ages 12 to 17 use the Internet, and 8 in 10 adolescents use some kind of social media. Raynes-Goldie and Walker (2008) note that online mediums provide youth with a space to connect with one another. In addition, these online platforms can facilitate offline activity by providing youth with information, other youth to connect with, and organizing tools. Online mediums provide a unique prospect for various youth engaged in YPAR projects to connect with one another, share ideas, provide research tools, and plan for action.

Raynes-Goldie and Walker (2008) argue that communication channels on the Internet can enhance and empower youth social interaction. They surveyed high school aged youth across nine continents on their engagement on a particular web based platform (i.e. Take it Global), and found that 44.1% of student noted that their direct engagement on the website supported changing lives in their community, and 49.5% reported changing their own lives. Thus, online platforms offer one method in scaling up YPAR efforts, allowing isolated groups the opportunity to communicate with one another, learn from each other, and organize coordinated social action.

YPAR projects remain isolated, limiting the potential for communication, co-learning, and diverse relationship formation between youth belonging to distinct YPAR groups, as well as opportunities for large scale organizing and social change initiatives. Since YPAR operates under the assumption that learning and knowledge is socially constructed, communication and interaction between students is a pivotal component of the research process. Large-scale efforts

must aim to preserve the opportunity for social relations to develop between geographically distinct and diverse groups of youth. Furthermore, critical inquiry into social relationships is needed to understand how they shape the YPAR community, and resulting social action. The application of online mediums can serve as an innovative tool to connect geographically distinct youth, facilitate collective learning, and distal organizing. In addition, online efforts can support innovative research by providing a platform in which to track communication patterns at different time points, allowing for the exploration of two related questions: (1) with whom do students participating in online YPAR mediums communicate? and (2) how do students' communication partners within the online medium influence their overall frequency in use of YPAR practices?

Communication channels are crucial to understanding and supporting large-scale coordination efforts. For instance, key similarities between students, or specific stages of YPAR (i.e. problem identification, data collection, data analysis, and social action) may enhance greater cross-group communication between geographically distinct groups. If so, these individuals or stages of YPAR can highlight ideal actors or time periods for leveraging larger scale organizing, and coordination. Thus, examining the online communication channels of youth engaged in geographically distinct YPAR efforts could provide crucial insights in the potential for online platforms as a tool for facilitating communication between distinct YPAR groups, as well as address disparities in civic participation. Diffusion is the spread of new ideas through specific communication channels. Examining diffusion processes within an online platform can provide valuable information regarding how natural communication occurs for large-scale YPAR efforts, and what motivates students to engage in YPAR efforts. This information can inform future strategies for dissemination efforts of YPAR, and large scale organizing.

Both changes in network relationships and the diffusion of overall YPAR practices will occur as youth from independent YPAR projects connect online. As noted above, traditional methods for evaluating YPAR programs relied heavily on self-report (e.g. interviews, surveys, or focus groups) (Ozer & Douglas, 2012; Ozer & Wright, 2012) or ethnographic observations and exemplary case studies (Cahill, 2007; Kohfeldt et al., 2011). However, when investigating online platforms, there is a need to track subtle and less apparent environmental changes (Delre, Jager, Bijmolt, & Janssen, 2010). Social network analysis (SNA) provides the unique opportunity to track nuanced patterns in student communication, and associations between communication and students' frequency in use of YPAR practices. Furthermore, engaging in key informant interviews with youth can provide illustrative information on an actor's perceptions and awareness regarding these online communication patterns and their motivation and tendency to utilize YPAR strategies overall.

Current Study

This study applied mixed methods (longitudinal social network analysis and qualitative interviews) to explore a recent initiative connecting students trained in a YPAR curriculum from three separate classrooms located in distinct schools in one school district. Students connected through an online interface (i.e. a secure private Facebook group). This study explored and described the formation of relations within the online social network over time. Research question one asks: what do patterns of communication in the online social networks look like over several months? Specifically, do students indicate a preference to communicate with youth to whom they are similar with respect to demographic characteristics (i.e. race, gender), geographic location (i.e. school), personal beliefs and activities (i.e. civic participation) or social

group identification (i.e. athletes, artistic kids), and does this look different at distinct time points?

In addition, this study applied a diffusion of innovation framework to examine the natural spread of YPAR practices communicated by students. The second research question focuses on identifying significant predictors regarding students' motivation and frequency in use of overall YPAR strategies. In particular this study examined, are students influenced by their peers (i.e. dyadic level), their position in the network (i.e. individual level), and/or personal attributes (gender, grade, or level of civic participation) in employing YPAR strategies?

In sum, this study focused on examining YPAR as a youth engagement approach for a variety reasons. First, YPAR is a prominent method that is flexible, adaptable, can be utilized in diverse contexts, and overlaps with a variety of fields (as described in detail above) thus reaping a multitude of benefits. Furthermore, YPAR has been identified as an approach that has been valuable in promoting civic participation, and engagement with historically marginalized groups. Thus, efforts to scale-up YPAR practices highlight the potential as a promising strategy for combatting disparities in civic participation. Second, this study addresses a recent call to the field of community psychology by Ozer, Petrokubi, and Zeldin (2013) regarding the need for innovative methods for assisting in the scaling-up of YPAR practices. Third, the partnering community-based organization, which held elective courses in 33 schools within a particular school district had experience in promoting positive youth development, as well as implementing sociopolitical development curriculum. For instance, the organization provided a youth-led peer-mentoring program to support conflict resolution within the school environment. Furthermore, the first semester curriculum explicitly focuses on students discussing issues of power and privilege (see Chapter 4, for further details on the partnering organization). In line with the

values of community psychology, which stresses serving the needs of the community (Kelly, 1970 & 1990), I agreed to support the organization, helping to develop structures to connect school-based YPAR projects.

The dissertation consists of two separate studies, and is organized in the following manner. Chapter two focuses exclusively on the literature review relating to study one (i.e. what do patterns of communication in the online social networks look like over several months?). Next, chapter three focuses on the empirical literature pertaining to study two (i.e. what are significant predictors regarding students' motivation and frequency in use of overall YPAR practices?). Chapter four is applicable to both study one and study 2 and provides an overview of the study design, as well as a description of the setting, data collection, and demographics of the sample. Chapter five focuses on measures, data analysis, results, and implications for future research and intervention design for study one, whereas chapter six focuses on the same aspects of study two. Chapter seven concludes with a discussion regarding implications for online platforms as a tool for intervention design and development, as well as opportunities for future research.

Chapter Two: Online Communication Patterns (Study One)

This chapter introduces empirical research and theory regarding the formation of relations both in-person, and through online platforms. Specifically, this chapter introduces literature relating to students' preference to communicate with individuals who are similar in respect to demographic characteristics (i.e. race, gender), geographic location (i.e. school), personal beliefs and activities (i.e. civic participation), or social group identification (i.e. athletes, artistic kids).

Selection processes concern the mechanisms by which individuals choose the peers with whom they form relationships (Veenstra, Dijkstra, Steglich, & Van Zalk, 2013). One particular class of selection processes is based on similarity. Individuals have more contact with those who are similar rather than different (Christakis & Fowler, 2009). Thus, people are more likely to make friends with peers that share similar attributes. This is logical and makes sense, as those who share several traits are more likely to find areas of commonality and have a greater chance of understanding one another's opinions and feelings, allowing for rapid and smoother communication. Similarities among individuals also enhance feelings of belonging, sense of predictability, and trustworthiness of the relationship (Veenstra et al., 2013).

The conscious or unconscious tendency to associate with similar people is known as homophily (Christakis & Fowler, 2009; McPherson, Smith-Lovin, & Cook, 2001). Historically, the first systematic evidence of a homophily effect came from examining school-age children (Bott, 1928). Researchers noted that, at a young age, children tended to sort themselves non-randomly into friendships (Bott, 1928; Hubbard, 1928; Lynn Martin, Fabes, Hanish, & Hollenstein, 2005). In the current study, key demographic

predictors of relationship selection relevant to high school-age youth include: 1) race, 2) gender, 3) geographic location, 4) social group identification, and 5) civic participation.

Understanding the natural online communication channels of youth engaged in geographically distinct YPAR efforts could provide crucial insights into potential online platforms as tools for facilitating communication between distinct YPAR groups. Findings could have implications regarding which similarities between actors promote communication, thus helping to identify patterns in communication as well as key leverage points. For instance, students who rate highly in civic participation may be more likely to communicate with one another, regardless of whether or not they attend the same school. Thus, students with high civic participation may be key actors in promoting coordination across distinct groups. Furthermore, particular stages of the YPAR project may facilitate greater diversity in communication, and thus highlight ideal stages for soliciting large-scale coordination. In sum, examining natural communication channels between distinct YPAR groups can highlight implications for future design efforts, as well as the utility of an online platform in facilitating large-scale coordination.

Race & Ethnicity

Many social networks demonstrate selection processes for similarities in race and ethnicity including marriages, business relationships, and friendships (McPherson et al., 2001). Similarities in race and ethnicity become particular strong predictors of friendship groupings as children transition from early to middle childhood, and remain consistent throughout adolescence and adulthood (McPherson et al., 2001; Shrum, Cheek, & Hunter, 1988). Consistent with the concept of homophily, research shows that by late middle childhood (i.e., 10-11 years of age), youth are more likely to form relationships

with peers of the same race (Currarini, Jackson, & Pin, 2010; Hallinan & Smith, 1989; Kao & Joner, 2004; Neal, 2010; Shrum et al., 1988, Tatum, 2003). There is empirical evidence that race becomes a stronger factor in friendship selection when children enter into middle childhood and adolescence (Hallinan & Smith, 1989; Neal, 2010; Shrum et al., 1988). Shrum and colleagues (1988) found that the prevalence of cross-race friendships declined after the third grade. They also found that the largest decrease in cross race friendships occurred during fourth and fifth grade. In a cross-sectional sample of third through eighth grade students, Neal (2010) found significantly higher levels of racial homophily in friendships in higher grades. Additionally, Hallinan and Smith (1989) also found significant growth in racially homophilous cliques from fourth to seventh grade. Tatum (2003) theorized that this rise in preference towards same race peers is partially due to a developmental increase in racial awareness and consciousness that occurs during middle childhood and thus may facilitate an increase in racial homophily.

In the context of American high school age students, Currarini and colleagues (2010) examined a sample from the Adolescent Health National Survey. They found strong patterns in students' tendency to form friendships with those of a similar race or ethnicity. This tendency exceeded rates of homophily that were expected, based on the proportion of students of each racial/ethnic background in the setting which indicates that friendship selection was not a random process. Currani and colleagues (2010) decided to compare two processes of racial homophily: (1) the chance of meeting peers of a different race or ethnicity and (2) a bias toward selecting peers who are racially similar. Their agent-based model examined the number of friendships that changed based on the racial composition of the school. Their model examined differences in relative magnitude in

preference of same race and ethnic friendships, and bias in the chance that people meet individuals of the same race and ethnicity over those who differ. The study found high rates of both student selection and interaction for peers with similar racial and ethnic backgrounds.

Yet, it is important to note that the processes, which support race-based peer selection, are contextually reinforced and institutionally embedded with our society (Clotfelter, 2001; Currani et al., 2001; Moody, 2001; Stearns, 2004; Tatum, 2003). Thus, it is problematic to assume that same race friendship selection is purely driven by individual impulses. For example, Moody (2001) employed SNA in a national sample of seventh through twelfth grade students, and found that three organizational factors within the school setting influence racial friendship segregation. First the amount of racial heterogeneity in the school impacted racial friendship segregation. Specifically, friendship segregation peaked at particular moderate levels of heterogeneity, and declined at noticeably higher levels of heterogeneity. Second, extracurricular activities that consisted of predominately one demographic group further supported racial separation among peers. In contrast, schools with policies that successfully recruited a diverse range of students had lower rates of racial segregation. Lastly, academic tracking was associated with racial segregation, creating status differences between students in academic university bound tracks (often Caucasian, and Asian) and students in non-academic tracks (frequently African American, and Latino/a). Segregation was less pronounced within schools consisting of racially mixed tracks.

In the setting of online social platforms, a less racially segregated network may emerge. In particular, institutional structure and policies that tend to promote separation

in races hold less influence in an online setting (Moody, 2001). Furthermore, one's racial identity within these online platforms may not be as evident (Thelwall, 2009). However, research shows that individuals participating in online platforms tend to communicate in a manner quite similar to in person groups, indicating a strong racial homophily effect (Thelwall, 2009; Wimmer & Lewis, 2010). For example, Thelwall (2009) examined patterns of relations on the social networking site *MySpace*, ages ranging from 16 to 105, with a noticeably low median of 22. A directed network was constructed in which connections were operationalized as actors posting comments on someone else's profile. Findings indicated that racial and ethnic homophily (i.e. the proportion of commentees that are the same race/ethnicity as the commentator) were strong, especially for minorities. Analyses were further confirmed when re-running findings on a restricted age group (16 to 22). In a sample of college students, Wimmer and Lewis (2010) found similar results examining peer relations on Facebook that indicated racial homophily. In addition, hompohily among students of a similar ethnic background, and the tendency for students of the same race to reciprocate friendships, and be-friend friends of friends amplify the effects of racial homophily.

Informed by the social network literature, examining both in person and online settings, I hypothesize that students of a similar race or ethnicity will be more likely to have a communication tie (i.e. tag, like or comment on one another's post) than those who differ **(Hypothesis 1)**. Notably, particular attention will be paid to key interviews indicating whether similarity in race or ethnic identification was a salient and cognizant factor for students' decision-making processes to determine with whom to communicate.

Gender

Notably, there are clear gender differences in how individuals communicate online. Specifically, females tend to be more prevalent users of online networks than boys during adolescence and early adulthood (i.e., ages fourteen to twenty) (Caverlee & Webb, 2008; Thelwall, 2009). Furthermore, females tended to have larger online social networks, and are more active in their online relationships than their male counterparts (Backstrom, Bakshy, Kleinberg, Lento, Rosenn, 2011; Thelwall, 2009). To illustrate, Backstrom and colleagues (2011) examined the activity of Facebook users, ranging from thirteen to sixty years old, with their top five closet friends and found that females were more active in all available online activities (i.e. viewing friends activities, posting comments, and sending messages). Furthermore, Thelwall (2009) examined gender by reviewing the top eight friends listed on MySpace profile pages. Thelwall (2009) found in a sample of fourteen to fifteen year olds, that females had a higher portion of friends of both genders compared to males, yet no significant preference for same gender friendships was identified.

Gender socialization theory provides a rationale for this noticeable pattern in gender differences in online behavior. Maccoby (1998) argues that social and cultural messages specifically instruct females of the importance of attending to interpersonal relationships. Thus, females at a young age are encouraged to focus their time, effort and thought into their relationships to greater extent than their male counterparts. Indeed, developmental research indicates that, compared to males, females exhibit heightened levels of understanding regarding peer dynamics (Cillessen & Bellmore, 1999; LaFontana & Cillessen, 1999). Thus, females are expected to be more active then males

in preserving, both in person and online, friendships, and as such are more engaged in online platforms.

In comparison, when examining a gender homophily effect the findings are less clear (McPherson et al., 2001; Neal, 2010). At younger ages, friendship groupings tend be clustered by gender (Eder & Hallinan, 1978; Hartup, 1989; Lynn Martin et al., 2013; Neal, 2010; Shrum et al., 1989). Gender is a particularly salient characteristic that young children identify as having in common with one another (Hartup, 1989). Carter and Mccloskey (1984) conducted interviews with elementary aged children, and found that children expressed strong views enforcing societal gender norms at a young age. Neal, Neal, and Cappella (2014) examined both the actual relationships and perceptions of relationships in a sample of second through fourth grade students. They found that students relied heavily on sex similarity as discernible marker to infer the existence of a relationship. Furthermore, Lynn Martin and colleagues (2013) noted that sex segregation in pre-school was strongly tied to preferential selection in same sex peers. Yet, gender homophily weakens a bit as children mature, and become increasingly interested in opposite sex relationships (Graham & Cohen, 1997; Neal, 2010). Based on the mixed findings in the literature, this study will take an exploratory approach to examining potential gender patterns, and gender homophily, employing both longitudinal SNA and key informant interviews to further explore gender patterns in online communication among students.

Geographic Space

Another factor that influences relationship formation is physical space, or the geographic closeness of actors. Space and physical proximity play a crucial role in

supporting relations between actors and group clustering (Pattison & Robins, 2002), since it takes greater exertion of resources to remain in contact with those who are physically distant (McPherson et al., 2001). Wellman (1996) noted that most interactions, for a variety of relationships, occur within a mile of an individual's home.

In particular, the smaller physical distance between people, the more likely they are to select one another as peers (Neal et al., 2014). This is the case with elementary school children (George & Hartman, 1996; Neal et al., 2014*;* van den Berg, Segers & Cillessen, 2012). Neal and colleagues (2014) noted that children were more likely to form relations with peers they are assigned to sit near. Similar findings in friendship formation were found with adolescent populations (Bagwell & Schmidt, 2011; Preciado, Snijders, Burk, Stattin, Kerr, 2012). Preciado and colleagues (2012) examined a three-wave network of thirteen to fifteen year old youth in Sweden. They found that the chance of friendship decreased as distance between homes increased. However, they also found that the chance of forming friends for any pair of youth was much weaker if they attended different schools. Thus, a shared school environment was found to be a more significant predictor of friendship formation than residential proximity.

One potential rationale for this phenomenon is Social Impact Theory (Latané, 1981), which states that the proximity of a person is an essential component of social interaction. Studies indicate that psychological and physical closeness are related (Back et al., 2011; Hall, 1966; Latané, 1981). Physical proximity is strongly associated with positive judgments and likeability (Back et al., 2011; Hall, 1966; Latané, Liu, Nowak, & Bonevento, 1995; Latané, 1981). To illustrate, van den Berg and colleagues (2012) examined the seating arrangements of students' grade 5th through 6th, strategically placing

students who rated their peers low in likeability next to one another. Results showed that a decrease in physical distance was significantly associated with higher likeability ratings for students who were negatively perceived by others at the beginning of the year.

Although, twenty-first century technology has dramatically decreased the effort or energy needed to remain in contact with people at a distance, proximity remains a significant predictor of friendship groupings and frequency of contact (Golder, Wilkinson & Huberman, 2007; McPherson et al., 2001; Wimmer & Lewis, 2010). In fact, Mok and Wellman (2007) examined the frequency of contact for residents in Toronto, Canada. They found that two-thirds of residents' contacts they communicated with on a frequent basis were located in closer geographic proximity. Furthermore, both face-to-face meetings, and discussions over the phone decreased as distance increased between the actors. Interestingly, this finding also holds true for online communication platforms, where electronic frequency is most common between people who live nearby one another (Golder et al., 2007), and demonstrate a strong overlap between real life and online networks (Christakis & Fowler, 2009).

Physical proximity is also a significant predictor for friendship groupings in online platforms. For example, Wimmer and Lewis (2010) found college students living in closer proximity to one another are more likely to be friends on Facebook, than those who attended the same university but were located in different resident halls. In this particular study, students are geographically located within one of the three classrooms in three distinct schools. Therefore, I hypothesize students who are in the same school will be more likely to have a communication tie than those in different schools **(Hypothesis 2)**. In addition, key informant interviews will take an exploratory approach in examining

whether students articulate geographic location as a notable factor in deciding which particular students they like to communicate with online.

Social Crowd

Research indicates in addition to demographics and proximity, a significant factor in youth peer selection processes is a sense of belonging to a particular, "social crowd" (Brown, Mory, & Kinney, 1994). Social crowds are defined as reputational labels indicating stereotypes of particular behaviors and personality characteristics (Bernstein, Sacco, Young, Hugenberg, & Cook, 2010). For example, jocks (adolescent who play sports) may be viewed as physically attractive, outgoing, and popular. Alternatively, thespians (adolescents whom are active in drama) may be viewed as expressive, artistic, and cultured. These labels are defined and designated by students towards their peers (Brown et al., 1994). One potential reason for the emergence and prominence of social group labels in adolescence is the development of social group identification, a crucial step in youth establishing a sense of autonomy outside of their family (Miller, Farrell, Barnes, Melnick & Sabo, 2005). Social group identification consists of a youth's cognitive affiliation towards a particular social crowd or identity (Miller et al., 2005).

Research indicates that social crowds facilitate peer selection processes (Brown et al., 1994; Urberg, Değirmencioğlu, Tolson, & Halliday-Scher, 2000). They note that social labels indicate to a student whether or not another student is similar enough in their tastes and interest to be a compatible friend. Thus, social crowds serve a role in fostering peer relations, by providing a specific channel in which students can select friendships that share similar behaviors and interests (Urberg et al., 2000). Urberg and colleagues (2000) found preference in friendship selection for students in the same social group.

They conducted a longitudinal study of students in 7th, 9th, and 11th grades located in the United States. Students identified their own social crowd, their friendliness to other social crowds (i.e. whom they are likely to greet, who they would be open to getting to know better), and their current friends. Results indicated that students were friendlier toward, and more open to forming friendships with those who belong to their own social group, or peers belonging to a similar social group.

In the context of online platforms, research regarding online friendship formation emphasizes the importance of shared interest as a channel in which users communicate and form relationships with one another (Bargh & McKenna, 2004; Liu, 2007). Although shared interests are not exactly the same as social crowd identification, they have commonalities such as similarities in experiences, hobbies, personality, and personal life styles. Eccles and Barber (1999) stress that adolescents' engagement in extracurricular activities promote their individual identity formation, and facilitates their need to relate to others. Furthermore, they found that adolescents who share similar activities and interests tend to belong to a similar social group. For online environments, Liu (2007) notes how social network profiles serve as a form of identity expression, in which users state specific interests, their tastes (i.e. movies, books, television shows, hobbies, music), style and display elements of their personality (i.e. humor, beliefs, etc.) in an effort to broadcast their identity and make connections with those who share similarities.

Similar interests are associated with online friendship selection. For example, Baym and Ledbetter (2009) examined online relations of adults from twenty-five countries on a social networking and music-streaming site. They found that users with similar musical taste were more likely to form online friendships and communicate with

one another. In addition, Lewis, Kaufman, Gonzales, Wimmer, and Christakis (2008) examined peer relations on Facebook, with a sample of U.S. college students. They noted that college students were more likely to have relations with students who share similar tastes in movies, music and books.

A specific homophily effect for social crowds has yet to be examined in the context of online platforms. Based on the literature regarding the salience social crowds and the tendency for greater communication between online users with common interests and tastes, I hypothesize that students who belong to the same or similar social group will be more likely have a communication tie than those who belong to different social groups **(Hypothesis 3)**. Furthermore, key informant interviews will take an exploratory approach in identifying students' awareness of social groups within the online platform, and their attraction to students who identify with a similar social group.

Civic Participation

Civic participation consists of individual and collective activity focused on public issues (Caprini, 2014). For instance, individual civic activity can consist of service-based work (i.e. volunteerism), while collective activity may include a coalition's involvement in grass roots organizing. Research indicates that youth have a similar level of civic engagement to their peers (Yates & Youniss, 1998). Yates and Youniss (1998) found that youth who associate with one another tend to engage in a similar degree of civic activity and participation (i.e. sustained community service, public protest, petitioning etc.). Although, literature exploring the role of peer relations with regard to civic participation is limited, there is existing literature focused on similarities in participatory behaviors (school and community engagement), and political views. These studies found that

youth's own political attitudes and level of school engagement are with associated the political attitudes and level of school engagement of their friends (Kandel, 1978; Tolson & Urberg, 1993; Urberg et al., 2000). For example, Kandel (1978) examined friendship pairings in a group of high school youth located in urban setting and found that friends were significantly more likely to hold similar views in political orientation (i.e. ranging from conservative to radical).

Studies examining selection processes in youth civic participation, participation in school activities, and political attitudes are limited and dated. Both Cohen (1983) and Kandel (1978) (as described above) conducted longitudinal studies of urban high school age students, and found that youth tended to indicate a selection preference for peers with similar levels of civic participation in their school environment. Both studies examined individual student behaviors in their school environment over time, and found similar behavior prior to friendship formation and termination as a result of dissimilar behavior as a significant factor contributing to in-group homogeneity among peers.

With regard to similarity in political attitudes, Lazarsfeld and Merton's (1954) original description of "homophily" emerged from their findings of similarity in political attitudes among adult friendship ties. They defined this trend as "value homophily" where individuals tend to select a higher proportion of friends with whom they shared similar principles, attitudes, and beliefs. Furthermore, they found that friendship ties tended to dissolve when there were stark differences in viewpoints and politics. This pattern of behavior theorized to be motivated by an individual's desire to associate with others who support their own beliefs. In a national longitudinal sample of adults in the United States, Knoke (1990) examined individual ego networks, and found a significant

tendency for individuals to form relations with those who share similar political preference and party affiliation (Democratic versus Republican). Trends in youth selection processes in political attitudes may mirror those found in adult populations.

For online platforms, users with similar civic activity, politics, and values tend to visit the same sites and communicate more frequently with one another. For example, Raynes-Goldie and Walker (2008) surveyed young people, ranging from 15 to 30 years old, about their use of the Internet in relation to their civic engagement efforts. They found that participants reported frequently using the Internet, as a channel to connect with like-minded peers. Thus, it may be the case that youth with similar levels of civic engagement, activities, or values for social action will have a higher tendency to communicate with one another. Regarding political attitudes, Adamic and Glance (2005) found a significant homophily effect for political blogs, specifically examining liberal and conservative bloggers. They noted the significant tendency for bloggers to reference and cite other bloggers who convey similar politics to their own. In particular, they found higher reciprocity between bloggers, citing one another, with similar political views. Furthermore, they noted greater connections (i.e. density) across groups of bloggers of a particular political orientation within the overall political blogging social network. Thus, based on current research, I hypothesize that students with more similar levels of civic participation are more likely to have a communication tie than those that differ in their levels of civic participation **(Hypothesis 5).**

Chapter Three: Diffusion of YPAR Practices (Study Two)

This chapter introduces empirical research and theory regarding the diffusion of innovation. Specifically, this chapter reviews literature regarding significant predictors of students' motivation and frequency of use of YPAR strategies. These include personal attributes (i.e., gender, grade, or level of civic participation), individual network predictors (i.e., centrality), and/or dyadic level predictors (i.e., their peers' use of YPAR strategies).

Diffusion describes the spread of novel ideas. Novel ideas encompass abstract concepts, information, technological fads as well as best practices through specific communication channels over time (Dearing, 2008; Rogers, 1962). This *spread* of new ideas represents the flow of novel information from the source to the adopter (Wejnert, 2002). This process is often described as a natural and uncontrollable flow, which occurs through existing communication channels (Green, Ottoson, García, & Hiatt, 2009). Research in diffusion science examines both factors and barriers in the exchange of information through current social systems (Rogers 1962).

Alternatively, dissemination describes an intentional or manipulated exchange of information. Dissemination can also be described as the conscious spread of novel information targeted at and for specific audiences (Green et al., 2009). There are various models for dissemination which include but are not limited to *source-based models*, which flow from the initial developer of the product to strategic marketing of the product to various audiences (Backer, David, & Soucy, 1995), and *user-based models,* which emerge from a response or need arising within the community (Klein & Sorra, 1996). Dissemination models are also conceptualized in the field of prevention efforts as flowing

from *research to practice*, in which evidence-based practices that are developed and tested within laboratory settings are then transferred to the field (Miller, Sorensen, Selzer, & Brigham, 2006). Alternatively, *community-based models* consist of researchers intentionally directing their efforts towards the community's needs (i.e. scientific information, and capacity building) in order to develop, and execute successful programs (Miller & Shinn, 2005; Wandersman, 2003).

Implementation explores to what extent the innovation consists of intended program elements (i.e. fidelity), and how much of the intervention participants receive (i.e. dosage) (Carroll, Howard, Vetere, Peck, & Murphy, 2007; Hasson, 2010). Research focused on implementation examines the quality of various components of the innovation, participants' reception to the innovation, and whether the program is distinguishable from other programs (Dane & Schneider, 1998; Durlak & Dupre, 2008; Hansen & McNeal, 1999; Hogue, Liddle, Singer, & Leckrone, 2005; Wandersman et al., 2008).

This study focuses on the diffusion processes rather than dissemination or implementation, as it takes an exploratory look at the natural flow of information regarding overall YPAR practices. Specifically, the study asks the question: what are the characteristics (i.e. individual attributes, positions within the network, or communication partners) that predict students' motivation in utilization of YPAR practices? Findings regarding the natural flow information may provide useful insights in guiding future projects, which utilize predictors as key leverage points for strategic dissemination efforts. If findings indicate that students with a large number of communication ties are more likely to frequently utilize YPAR practices, future studies can intentionally focus

efforts on increasing the number of communication ties. For instance, researchers can promote a Facebook norm, which encourages students to communicate with at least one new person a week.

Notably, diffusion studies regarding youth have primarily focused on adult staff interpersonal relations and their association with empowering strategies and participatory practices. For example, studies have focused on the spread of participatory action research (Ozer, Ritterman & Wanis, 2010), and youth adult partnerships within youth settings (Zeldin, Camino, Mook, 2005). When youth interpersonal networks are examined, research often focuses on the spread of risk-taking behaviors (i.e. un-protected sex, drug use, smoking etc.) (Bearman, Moody, & Stovel, 2004; Christakis & Fowler, 2008; Mednick, Christakis, & Fowler, 2010). To date, there exists a gap in both the literature on YPAR and diffusion science examining the spread of innovations generated, and exchanged by youth.

Diffusion Theory

Rogers (1962) notes five key elements to diffusion: 1) the innovation (an idea or practice that is viewed as new), 2) the adopters, 3) communication channels (the transfer of information), 4) time, and 5) the social system (the external environment, as well as internal ties). This particular study examines the role of *communication channels*, and the role of *internal ties* within a social system. Diffusion science stresses that an individual's actions are relational in nature, and are influenced by a set of interpersonal interactions (Ryan & Gross, 1943; Simmel, 1950). Furthermore, communication among individuals facilitates the adoption of innovation (Rogers, 1962; Strang & Sole, 1998; Wejnert, 2002).

Ryans and Gross (1943) determined four types of adopters with diverging degrees of social connections. First, early adopters identified as key opinion leaders, have high social capital, and are well connected to other actors within their social network. Second, early majority adopters, often have direct ties to early adopters, average social status, and are rather well connected within their social network. Third, the late majority, tend to have indirect ties with early adopters, often adopt after most of their social ties, and tend to have restricted number of social connections. Lastly, laggards are the last to adopt. These individuals have little to no social status, and tend to be socially disconnected with limited access to others within the social network. The diffusion literature highlights the role of network position as well as key relations in influencing the utilization of an innovation.

In the context of this study, both the network position of actors and their alters (i.e. communication partners) in the online social network can shed light on students desire and motivation to utilize YPAR practices within a web-based platform. At the individual level, this study will examine if predictors such as the proportion of existing communication ties (i.e. high degree centrality) as well as gender, grade, and civic participation are associated with students' frequency in utilization of overall YPAR practices. At the dyadic level, this study will examine if students are influenced or motivated by whether their peers (i.e. individuals with whom they communicate frequently, or share similar relations and positions within the online network) frequently utilize YPAR practices.

Individual Characteristics - Gender

Researchers in the field of sociology, note that children are socialized at a young age to identify with a particular gender, and learn the societal expectations and behaviors associated with that gender (i.e. also known as gender roles) (Maccoby, 2000; Mau & Lynn, 2000; Warrignton, Younger, & Williams, 2000; Xu, 2006). In the context of academic work, societal norms expect girls to have stronger work ethic (Mau & Lynn, 2000; Warrignton et al., 2000), high self-reliance (Deslandes & Cloutier, 2002) that promotes greater efforts of their academic course work compared to boys (Mau & Lynn, 2000).

Furthermore, psychological perspectives regarding sense of self-worth find students are more concerned with protecting their sense of worth in the school environment than being academically successful (Jackson, 2002 & 2003; Saunders, Davis, Williams, & Williams, 2004). Research indicates that boys are more driven by the desire to be competitive with others, and thus are more likely to become defensive when their academic ability is challenged (e.g. get a bad grade, or unable to do homework assignments) (Jackson, 2002 & 2003; Osyerman, Grant, & Ager, 1995; Xu, 2006). Jackson (2003) identified a number of defense strategies boys utilize when they struggle academically, such as postponing their work, lack of effort, actively avoiding the appearance of working hard, and promoting the image of effortless academic achievement. To illustrate, a boy might put off his homework assignment in an effort portray an image that he can be academically successful but makes the conscious choice not to do so. Xu (2006) employed surveys regarding homework strategies utilized by 9th through 12th grade high school students. Girls reported spending more time doing

homework, and were less likely to come to class without completing their work compared to their male counterparts.

Studies employing critical race theory examined disparate outcomes in boys receiving greater punishment, and discipline from their teachers than girls (Fine, Burns, Payne, & Torre, 2007; Langhout & Mitchell, 2008; Saunders et al., 2004). This trend is particularly notable for Black/African American, and Latino boys (Langhout & Mitchell, 2008). Disparate outcomes in punishment with regards to gender (and race) is identified as a contributor to boys being more likely to withdraw from school, as well as higher rates of dissatisfaction within their school environment (Fine et al., 2007; Midgley, Arunkumar, & Urdan, 1996). Informed by the literature specifically that girls are more likely to complete their course work, I hypothesize girls in the context of this study will more frequently utilize YPAR practices overall (within their elective course) compared to boys (**Hypothesis 5).**

Individual Characteristics - Grade

There is less agreement in the developmental psychology literature regarding how an adolescent's age influence their commitment or follow-through on schoolwork, and overall relationship to school (Mascolo, Fischer, & Neimeyer, 1999; Piaget, 2008; Waxman & Huang, 1997; Way, Reddy, & Rhodes, 2007). Some researchers argue that age is a significant factor impacting how accurately students process, and retain information (Mascolo et al., 1999; Piaget, 2008). Piaget (2008) argues that there are developmental differences between early and late adolescence, and that one's reasoning and capacity to understand complex constructs beyond one's immediate experience increases as adolescents' age.

Steinberg, Cauffman, Woolard, Graham, and Banich (2009) found, through computer simulated tasks, that logical reasoning abilities, and basic information processing skills are significantly higher in adolescents ages 16 to 18 (consisting of Juniors and Seniors), compared to ages 14 to 15 (consisting of Freshmen and Sophomores). Yet, when they utilized self-reported questionnaires to examine psychosocial tasks (e.g. future orientation, resistance to peer influence, impulsivity, and sensation seeking) there were no identifiable differences between ages 14 to 18. In a similar vein, Xu (2006) found no differences between 9th though 12th grade students with regards to their frequency in employing homework strategies (e.g. budgeting time, keeping a calendar with due dates), as well as homework completion.

Cultural developmental theorists argue that youth's cognitive ability is not solely defined by their biological age, but is also influenced by how a particular society defines childhood and adolescence (Rogoff & Chavajay, 1995; Rogoff & Morelli, 1989). Recent developmental research suggests that youth hold more complex cognitions than previously presumed (Kellet, 2004; Rogoff, Paradise, Arauz, Correa-Chávez, & Angellilo, 2003). In the context of this study, youth working on YPAR projects had the opportunity to utilize a combination of cognitive tasks (e.g. critically exploring social issues, analyzing data and identifying themes) and psychosocial skills (e.g. following through on tasks, navigating potential barriers). Thus, this study will take an exploratory look at how grade predicts students' frequency in utilization of YPAR practices.

Individual Characteristics - Civic Participation

Civic participation has been tied to positive developmental outcomes as well as positive academic outcomes (Balsano, 2005; Cabrera et al., 2014; Yates & Younis,

1996). Yates and Younis (1996) conducted a meta-review that showed youth engaged in civic activity were more likely to try new things, be internally driven, and engage in other prosocial school activities. Furthermore, youth actively involved in their community were more likely to have consistent school attendance, greater academic confidence, and motivation to be successful in school compared to their counterparts (i.e. youth not actively involved in their community) (Balsano, 2005; Johnson, Mortimer, & Snyder, 1998; Kleiner & Chapman, 1999).

Research employing large-scale high school surveys found that students, with earlier opportunities to engage in civic activity, were more likely to seek out, and be open to other forms of civic participation (Kanhe & Sporte, 2008; Keeter, Zukin, Andolina, & Jenkins, 2002). For instance, Kahne and Sporte (2008) conducted a study with 4,057 students from 52 high schools, employing hierarchical linear modeling they found that students engaged in some form civic activity (e.g. service learning projects, having opportunities to discuss current events, and/or problems within their community) reported a higher commitment to civic participation, compared to students who did not have opportunities to be civically engaged.

In the context of this study, YPAR is being offered in an elective course (see Chapter 4 for further details). Youth with higher civic participation may be more motivated to do well in the course, engage in social change efforts in their school, and thus have greater interest in utilizing YPAR practices. Additionally, a key component of YPAR is that it involves young people exploring the sociopolitical context of their environment in order to identify the root cause of a problem, and translate findings into social action strategies (Fox et al., 2010; Friere, 1970). Thus, youth who demonstrate

high levels of civic participation may be more likely to utilize YPAR practices than youth with low or little to no civic activity, as they have additional experience discussing and tackling social and political issues within their school or community (Cammarota, 2007; Cammarota & Romero, 2011; Watts & Flanagan, 2007). Guided by the current literature, I hypothesize students with higher levels of civic participation are more likely to frequently utilize YPAR practices overall compared to students with low civic participation (**Hypothesis 6).**

Individual Characteristics - Degree Centrality

Studies examining the diffusion of innovation note that particular individuals tend to have earlier access to, and use of an innovation in comparison to the rest of the population (Rogers, 1962). Social capital theory provides a theoretical rationale for this phenomenon (Portes, 2000). Specifically, because early adopters tend to have more ties than others, they may have an advantage in accessing information and resources (Burt, 1997; Portes, 2000). Burt (1999) described diffusion as a process where initially direct connections channel information to actors. Individuals who have more direct connections to other actors have a higher chance of quickly accessing new information within the network, along with speedier communication channels to disseminate information to others (Katz & Lazarsfeld, 1970; Rogers, 1962). For instance, Granovetter (1983) notes that individuals with few ties will be deprived of information, insulating them from the latest ideas. Furthermore, Krackhardt (1990) noted that individuals with numerous relations (i.e. greater number of connections) with others are more likely to risk adopting a new idea or innovation. Individuals who face vulnerability (i.e. less connections to

others) risk isolation and are often uncomfortable with scenarios of uncertainty, and therefore may be more hesitant to adopt new ideas.

Individual social network characteristics can further highlight how specific positions in the network may place particular individuals at an advantage in locating new information. Degree centrality measures the number of relationships a specific actor has with other actors in the network (Hanneman & Riddle, 2005; Scott, 2000). Coleman and colleagues' (1966) study on physicians' prescriptions of tetracycline noted that doctors with more connections (i.e. high degree centrality) in advice giving networks were more likely to adopt the innovation. Coleman et al. (1966) interpreted this trend as the greater proportion of ties an individual has out of all possible ties, the more likely they are to hear about an innovation. Furthermore, Kempe, Kleinberg, and Tardos (2003) conducted computation experiments employing agent based modeling with the aim of identifying early adopters and influential actors within a social network. They found that individuals with high degree centrality had higher rates of early adoption and influence over others.

In the current study, students with high degree centrality communicate with a large portion of students out of all possible students on the Facebook group. Students with high degree centrality may have greater exposure through direct communication channels (i.e. posting exchanging ideas with youth online) regarding YPAR practices. This study defines degree centrality in terms of a student's number of social connections (i.e. number of other students whom communicate with them on the Facebook group). A student's degree centrality is operationalized as including both the amount of communication a student receives from other students (in-degree), and the amount of communication a student relays to other students (out-degree) (Freeman, 1979;

Hanneman & Riddle, 2005). Students who receive communication from and relay communication to many of their peers (i.e., high degree centrality) will have greater direct access to their peers' ideas, in particular various and diverse YPAR strategies. Thus, students with high degree centrality will be more likely to frequently utilize YPAR practices overall compared to students with low degree centrality **(Hypothesis 7).**

Dyadic Level

Diffusion researchers have examined individuals' relations in a social network in an effort to explain how new ideas and practices are adopted (Rogers, 1962). Interpersonal communication is a significant channel in facilitating rates of adoption (Katz & Lazarsfeld, 1970; Rogers, 1962; Utterback, 1974). The adoption of a new idea or practice entails some degree of risk and uncertainty, and thus, in making decisions about whether to adopt an innovation, individuals often refer to the narrative of others with whom they are connected (Rogers, 1962). The theoretical mechanism of cohesion emphasizes a relational approach, examining the connection between actors, and aggregating actors connected by cohesive bonds into particular clusters (i.e. cliques) (Alba & Moore, 1978).

Cohesion stresses that individuals who have strong connections (i.e. high connectivity) to those who adopt the innovation are more likely to embrace the innovation (Coleman et al., 1966; Frank, Zaho, & Borman, 2004; Qadeer, 2006; Rogers, 1962). Cohesion as a mechanism of diffusion emphasizes that information tends to spread across close intensely connected groups of individuals (i.e. cliques) with more concentrated connections (i.e. cohesive bonds) (Alba & Moore, 1978). The rationale for cohesion is these more frequent interactions engender the exchange of rapid information

and the likelihood an actor will adopt the innovation. In addition, these interactions place social pressure on an individual to conform to a particular set beliefs or practices as it grows support within the group (Strang & Soule, 1998).

Coleman and colleagues (1966) classic study of the adoption of medical innovation focused on doctor's adoption of a new pharmaceutical drug in the 1950s and illustrated cohesion as a mechanism for diffusion. In their study, the spread of information regarding the new prescription drug traveled by word of mouth (i.e. interpersonal connections) among doctors. For instance doctors who were closely connected to other doctors utilizing the pharmaceutical drug were more likely to follow suit and prescribe the drug, rather then doctors who solely received information of the drug from advertisements or empirical research. Thus, Coleman and colleagues (1966) concluded that actors resolve their decision of adoption through dialogue and contact with others. This pattern was replicated through agent based modeling simulation, where Watts and Dodds (2007) found that rates of adoption resulted from influenced individuals prompting those they were connected to embrace the innovation.

In the context of education Frank and colleagues (2004) examined the exchange of information regarding teaching processes, employing longitudinal SNA in six schools focused on the implementation of new computer based technology. They noted that social processes within the school impacted the implementation of the innovation. Specifically, teacher's colleagues with whom they frequently communicated with adoption of the innovation, along with regular access to teacher's with expertise in the innovation were both significant predictor in rates of adoption. Notably, the mechanism of cohesion can be applied in the context of youth. For instance, Carroll and colleagues (2002) conducted

focus groups with high school students regarding factors contributing to their adoption of technological devices (phone applications, social media sites, etc.). Students noted they often adopted new devices if their peers with whom they were connected had, in order to strengthen their communication and resist becoming isolated.

There exists a gap in both the literature on YPAR and diffusion science examining the spread of innovation generated, exchanged, and adopted by youth. Thus, based on current research, I hypothesize that individuals are more likely to frequently utilize YPAR practices overall if they communicated with others who also frequently utilized YPAR practices **(Hypothesis 8).**

Chapter Four: Overview of Study Design

This chapter is an overview of the study design, applicable to both study one and study two. The following chapter (i.e. chapter five) will focus exclusively on study one, and chapter six will concentrate solely on study two. This chapter will consist of the following three components: 1) introducing the research design (i.e. mixed-method sequential explanatory design), 2) providing description of the setting in which the study took place, 3) specifying data collection (i.e. social networks & qualitative interviews), and 4) describing the demographics of the total participant sample, as well as a sub-group of key interviews.

Mixed-Method Designs

Mixed methods are advantageous in that they receive the benefits of both quantitative and qualitative approaches (Östuland, Kidd, Wengström, & Rowa-Dewar, 2011). Mixed methods designs are suited for exploring new research phenomena, and are not dominated by a specific methodological paradigm or theoretical framework. Researchers can also use mixed methods designs in an explanatory manner. Here, findings from a part of the study using one method are further examined using another method. Additionally, triangulation may be employed to see if findings converge around common patterns or themes. This study employs mixed methods for explanatory purposes with SNA being the dominant method utilized. Qualitative interviews are also employed as a supplementary method in order to further unpack the findings.

There are several benefits to employing mixed method designs. First, using multiple methods provides the researcher with alternate lines of inquiry, both inductive and deductive (Caracelli & Greene, 1997). Second, mixed method designs are able to

identify patterns of convergence, along with diverging perspectives, thus enhancing the researcher's holistic understanding of the phenomenon (Greene & McClintock, 1985). Lastly, mixed method designs allow researchers to engage in critical multi-layered investigation into context, in which quantitative findings can highlight group and setting level patterns, whereas qualitative findings can dig deeper into individual perceptions and experiences (Greene, Caracelli & Graham 1989).

However mixed methods do come with some limitations. Notably, it can be a challenge to combine two contrasting paradigms together in the research stages of data analysis and interpretation (Mertens, 2014). Researchers employ several different approaches to address this challenge. Some utilize a single paradigm approach, promoting a primary method guided by the context of the research question (Campbell, Patterson, & Bybee, 2011; Rallis & Rossman, 2003). Others embrace both paradigms, employing a dialectical approach. In this case, the researchers switch between paradigms to resolve divergent perspectives, and identify new solutions (Greene, Benjamin, & Goodyear, 2001; Greene & Caracelli, 2003; Greene, Kreider, & Mayer, 2005). Still others utilize theoretical plurality, which emphasizes that different sections of the study can be informed by diverging paradigms (Creswell, Plano, Clark, Gutmann, & Hanson, 2003; Feilzer, 2010). This particular study utilizes a single paradigm approach, emphasizing quantitative methods. Guided by the context of the study, both research questions focus on quantitative questions, exploring significant predictors in communication throughout the project (study one), and overall frequency in utilization of YPAR practices (study two).

While there are many different mixed-method designs, they all employ one of two data collection strategies (Creswell et al., 2003). In some designs the data is collected sequentially. For example, one sequential explanatory design could consist of collecting, and analyzing quantitative data first, and qualitative data second. In this design, emphasis is placed on the analysis of the quantitative data, with qualitative aids in the interpretation of the findings. Other designs consist of the data being collected concurrently. For instance, a concurrent triangulation design uses two different methods simultaneously to confirm or corroborate findings within a single study. In this case priority is given to both methods.

This particular study consists of two distinct methods of data collection: SNA and qualitative semi-structured interviews. Data collection remained separate. That is, qualitative findings were utilized to unpack the SNA findings (Caracelli & Greene, 1997). This study employed a sequential explanatory design, which emphasizes one *primary* method for identifying findings, and uses a *supplementary* method to provide a follow-up explanation of the findings (Campbell et al., 2012; Creswell et al., 2003). There is one deviation from a sequential exploratory design in the current study. Network data was collected both before and in conjunction with qualitative data collection. However, network analysis conducted in March was used to identify key informants for qualitative interviews collected in May. Furthermore, while data collection for both methods ended at the same time (i.e. May) analysis of qualitative data was used to further understand trends in the SNA findings. In other words, qualitative analysis was used to answer complementary follow-up questions to questions explored in the quantitative analysis, with the qualitative data being *quantitized* (see data analysis section below).

In the context of this study, primary emphasis is on the quantitative findings (i.e. SNA) with qualitative data providing additional information (i.e. key informant interviews). This design provides me the ability to further explore and explain the phenomenon of interest and results. Specifically, exit semi-structured interviews were employed to further understand participants' perceptions of participating in the online platform. For example, if quantitative network results indicated that students with high degree centrality are significantly more likely to use YPAR practices with greater frequency, then data from qualitative interviews may provide further clarity. For instance, students who tend to connect with numerous students online (i.e., high degree centrality) may indicate that they are more likely to use any set of YPAR practices after communicating with more then one other student online regarding their use of YPAR practices. In this hypothetical example, both methods support the trend that the number of communication ties a student has is significantly associated with their use of YPAR practices. However, it is noteworthy that the second method (i.e. qualitative interviews) highlighted a potential underlying mechanism for this trend in social network analysis in that a student's degree centrality increased the likelihood of them hearing and seeing examples of YPAR practices more then once. This repetition enhanced their frequency in overall use of YPAR practices. This illustrative information can be used to inform future intervention efforts to increase diverse communication among students online or to enhance the use of YPAR practices by providing insight into students' decision making processes while participating in the online platform.

Design of the Current Study

Both study one and two were explored using SNA and qualitative interviews. For visual illustration see Figure 1 below. Regarding study one, data collection involved: (a) network snapshots, (b) in person surveys with site coordinators and youth, and (c) semi-structured interviews with youth regarding with whom they selected to communicate (see further details in data collection for research question one in chapter five). In contrast, in study two, data collection consisted of: (a) network snapshots, (b) online surveys with youth about their use of YPAR practices, and (c) semi-structured interviews with youth regarding the factors that influenced their decision to adopt a particular YPAR practice into their own action research project (see further details in data collection for research question two in chapter six).

Setting

This sample included a subset of high-school aged youth participating in a district wide youth service organization. The youth service organization, established over thirty-five years ago is located on the west coast of the United States. Presently, the organization is working within thirty-three classes and provides in-school programs delivered by certified site coordinators. These site coordinators are typically licensed teachers within the district. From 2011 to 2012, the community organization served 574 students across the district (Hammond, 2012), which has a total enrollment of 56,000 students (US Census Data, 2011).)

The organization runs yearlong elective classes with teachers (i.e., site coordinators) that focus on empowering high school students to promote a positive school climate in order to achieve justice for all students. A crucial goal for the organization is to create a larger district wide support network for youth by testing innovative ways to

connect students across the school district. Three site coordinators (certified classroom teachers) in three separate schools (School A, B, and C)[2] volunteered to participate in the study. These sites conducted YPAR projects within their school from January 2014 to May 2014. I collaborated with the organization for over a year (see Appendix A for a reflective description of my role).

Students were connected to a secure private Facebook group at the beginning of January. Students submitted bi-weekly post as part of a series of "*Do Now's*" response questions, updates on their project, and activities (i.e. photography assignments, online surveys) regarding their action research project. Furthermore, students were encouraged to comment on one another's posts. Site coordinators were instructed to conduct a lesson every other week that allocates time for students to go online to share information, updates, and pose questions to the group regarding their action research projects.[3] Since, this study was only assessing students currently engaged in YPAR, only these three classrooms are included, all others were excluded.

Sites YPAR Projects

All three classrooms autonomously selected to focus their projects on the general topic of *public health*. Yet, each class diverged on their specific social issue. Students in School A selected improving student-counselor relationships, specifically school counselors' lack of availability, as their area of interest. The class designed and distributed surveys to the student body soliciting their input, and also conducted

[2] To protect the confidentiality of the school/students all identifying information was removed.

[3] Site coordinators enforced students' completion of bi-monthly posts on the Facebook group regarding their YPAR project. However, site coordinators were specifically instructed to allow students the freedom to communicate with whomever. This implementation was further assessed, and confirmed during key informant interviews.

interviews with counselors. Interviews indicated that counselors often felt overburdened with administrative tasks (e.g. students schedules). Students partnered with their principal to write a proposal to the district requesting an additional counselor.

Students in School B chose to focus on improving the school health curriculum. Students interviewed the student body regarding their awareness of issues surrounding sexual health, and found that the student body wasn't adequately informed. Students developed an informational video focused on safe sex practices, and consulted with the school health teacher. Students noted the primary reason for the poor health curriculum was a lack of available resources. After several attempts to work with the school administration, they decided to raise funds on their own by holding a bake sale.

Students in School C determined depression to be the most prevalent problem facing adolescents, and worked towards supporting their schoolmates who felt isolated. Students collected compliment cards, on which they encouraged the student body to write compliments to their peers. The class then delivered those cards. After evaluating their project, students found that the cards were primarily being delivered to popular students. Students partnered with the school principal, and crafted a plan to develop a "confessions board" which consisted of the student body writing down anonymous problems with which they were struggling with the goal of decreasing feelings of isolation.

Student Demographics in the Three School Sites

The three classrooms engaged in this project were located in three separate high schools residing in California, within one school district in the Bay Area. Great Start's rating of schools is based on standardized test scores. A school is rated a 1 out of 10 if they ranked in the bottom 10% of the state in test scores, then a 2 if they are in the next

10%, and so forth. Sites varied in their rankings. For instance, School A received a 10 out 10 rating, ranking in the top 10% of the state. Notably, School A is a high performing magnet school, in which students have to receive high marks on their eighth grade state assessments in order to qualify for admittance. Whereas, School B is one of the lowest performing schools in the district, and received a 3-rating, ranking in the bottom 30% of the state. Lastly, School C received a 7-rating, ranking in the top 30% in the state (GreatSchools.Org, 2012).

In terms of race, School A's student body included students who were Asian (70%), 14% Caucasian, and 8% Hispanic. School B's student body included students who were Hispanic (45%), 30% Asian, and 16% Black. Finally, School C's student body included students who were Asian (66%), 19% Hispanic, and 6% Black (GreatSchools.Org, 2012). Regarding socio-economic status, 40% of School 1's student body was eligible for free or reduced lunch. Whereas, the vast majority of School 2's student body was eligible for free or reduced lunch making it a Title 1 eligible school, and thus providing supplementary food for all students. Lastly, 63% of School 3's student body was eligible for free or reduced price lunch.

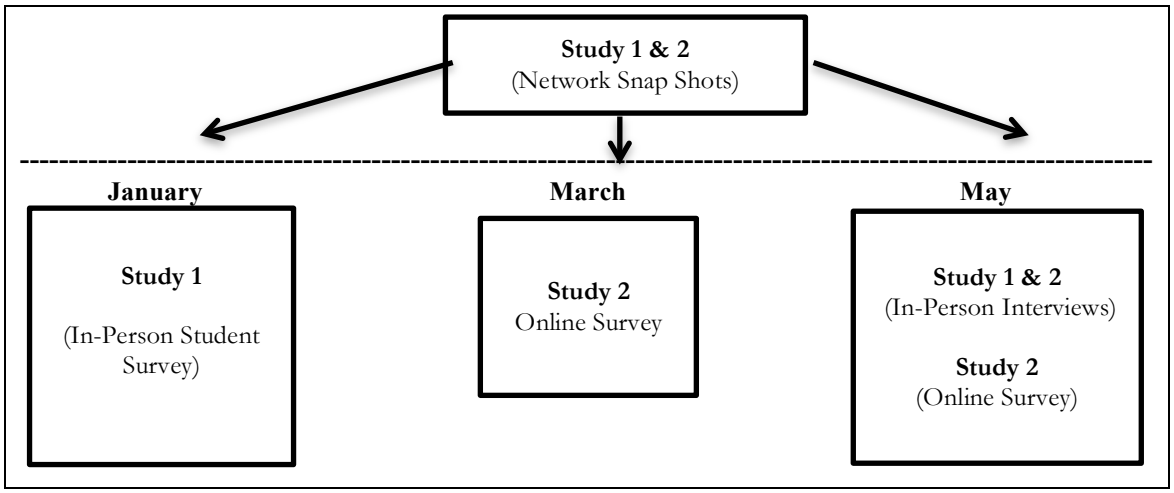
Data Collection

In the section below, a general description of both measures of data collection, SNA, and semi-structured qualitative interviews are provided.

Social Networks

SNA provides a novel approach for innovative research. A pivotal difference between conventional data analysis and SNA is that the former focuses on the relationship between individual actors and their attributes, whereas the latter

Figure 1. Research Design



examines the structure of interactions within a setting by quantifying relationships (Kornbluh & Neal, *in press*; Neal & Christens, 2014). To measure networks, researchers conduct SNA using a specific group of actors referred to as a system (e.g. students on a closed Facebook group). SNA can provide measures of the entire system (i.e., setting level measures), similarities between pairs of actors (i.e. dyad level measures), and of actors' positions in this system (i.e. individual level measures) (Hanneman & Riddle, 2005; Kornbluh & Neal, *in press*).

This study employed social networks to understand: (a) communication within the online platform (study one), and (b) how students' position within the online platform (i.e. their communication partners, and how many people they communicate with influences their frequency in use of YPAR practices overall (study two). As previously noted, traditional methods for evaluating YPAR programs relied heavily on self-report (i.e. interviews, surveys, or focus groups) (Ozer & Douglas, 2012; Ozer & Wright, 2012) or ethnographic observations (Cahill, 2007; Kohfeldt et al., 2011, Sanchéz, 2009). A gap in the current YPAR research is the application of methods that track subtle and less

apparent environmental changes. YPAR is described as a collective activity in which youth develop a shared understanding that they then utilize to engage in research guided social action (Kohfeldt et al., 2011). Thus, innovative methods are needed to capture and track key processes over time: relationship building, engagement in research practices, and the spread of innovative ideas and actions.

This study examines students in three classrooms who are engaging in participatory action research, and who belong to and communicate on an online platform (i.e. secure private Facebook group). Relations between actors consist of online communication. This communication includes comments actors post to one-another, "likes" indicated by the "like" button, and "tagging" labeling a specific student's name in another student's post. This study uses global network data collection, gathering data from every student within the online platform. For this study, the sample boundary has already been set *a priori* (Borgatti & Molina, 2005), meaning this sample is bounded around physical constraints pre-defined by the online platform (i.e. secure private Facebook group) (Wasserman & Faust, 1994).

Compared to other forms of research, SNA requires data collected from all actors within the specified boundary in order to achieve an accurate picture of the network. Exclusion of actors can potentially misrepresent the network (Wasserman & Faust, 1994). This proposed study was successful in capturing the entire online network. First, parents were notified by the organization of students' participating in the online Facebook group in December 2013. Parents and students were provided the opportunity to object to participating in the Facebook group by contacting the organization directly. Notably, 94% of the sample provided youth assent and parental permission to engage in

the student. Second, MSU IRB granted the study a waiver of parental consent and student assent for secondary participants (i.e. 6% of the sample). Secondary participants are individuals who did not provide parental consent and/or assent to participate in the study, and yet the study still captures information on these individuals. The Common Rule (C45CFR46) allows the IRB to waive the requirement for informed consent, if the study poses minimal risk, can not practically be carried out without the information, and participants are informed of any risk that emerge (Klovdahl, 2005). Thus, with a waiver of consent, the researcher is able to include participant data even if active parental consent and/or assent is not provided (Klovdahl, 2005). In addition, site coordinators provided basic demographic data regarding students absent during data collection, or whose parents did not provide permission (i.e. secondary participants). Thus, this study tracked all students belonging to the group's online network (i.e. communication patterns).

Three network snap shots of the Facebook group were taken in January, March, and May of 2014. Network snapshots consist of developing adjacency matrices for each month. In these matrices, rows indicate the senders: students who post comments, "likes" to other students posts, or "tag" other student's names in their post. Columns indicate the receivers: students who receive comments, "likes" from other students regarding their posts, or their named "tagged" in another student's post. For further visual illustration, see Table 2 below.

In Table 2, actor A communicates with actor D three times, whereas, actor D communicates with actor A once during this time span. Each snap shot captures a directed network of communication among students online. Network snap shots were

recorded through visual inspection of the Facebook group (i.e. who comments, likes whose post or tags a students name within a particular time period stamp), and double-checked for quality assurance by an undergraduate research assistant trained in data collection--reliability scores averaged 85%, all disagreements were reviewed and corrected.

Table 1. Example Network Snap Shot

Actors	A	B	C	D
A	----	1	0	3
B	0	----	2	0
C	0	0	----	0
D	1	0	0	----

The network relationships were then binarized (i.e. either present or absent). Based on initial descriptive analysis for February 2014, commenting on other student's posts was a particularly low rate behavior (M= 1.47, SD= 2.83). In addition, a preliminary analysis at the dyadic level revealed that is not a lot of variation in the number of comments between pairs of students (M =.62, SD = .23). Therefore, in this network, relations (i.e. edges) were coded as present from student A to B if student A commented, "liked", or tagged student B at least once within a particular snap shot (i.e. month interval).

Two strategies were utilized for validity checks on the communication measurement. First, follow-up questions were provided during interviews with key informants, to dig deeper into their perceptions of communication on the Facebook group. An example follow-up question was *"what was communication like on the Facebook group?"* All twelve interviewees tended to describe communication on the

Facebook group as positive, and an overall supportive experience. For instance, *"people were really nice"*, and *"it was encouraging, I got really good feedback"*. Furthermore, all Facebook comments were reviewed and coded into four non-mutually exclusive categories: 1) positive—indicating an encouraging, and or supportive remark (e.g. "cool", "interesting idea", and "nice work"), 2) informative—eliciting no emotion but merely providing material ("right now we are trying to spread awareness", "were not at that stage yet", 3) negative—communicating a poor, and or harsh reaction (e.g. "that's stupid", "you're wrong", etc.), or 4) ambiguous —communicating an unclear idea or concept outside the realm of the YPAR project (e.g. "Barak Obama", "hey did you do the physics homework?", etc.). Categories were not coded as mutually exclusive, as a post may contain both a positive message (i.e. encouraging a student) as well as be informative. Analysis indicated a similar trend in that communication on the Facebook group generally was encouraging and educational. For instance, fifty-seven percent of the comments on the Facebook group were coded as positive, 33% were identified as informative, 0% was coded as negative, and 13% were identified as ambiguous.

Qualitative Analysis

Qualitative methods are often employed when exploring a less understood complex phenomenon (Creswell, 2007). Compared to quantitative methods, qualitative methods allow for a more exploratory open-ended inquiry into a particular phenomenon, that does not depend on pre-established categories and response options (Kleinman, 2007; Patton, 2002). Furthermore, utilizing qualitative data in mixed method studies helps highlight alternative perspectives, illustrate, or provide background that complement and contextualizes quantitative findings. Strategic interviewing of

participants discloses the distribution and variation in experiences regarding a particular phenomenon. Students' perceptions regarding opportunities to select particular friends to communicate with, or access to new information may vary depending upon how many students they communicated with, or with whom they tended to communicate.

A key goal of this study was to understand the formation of relations and diffusion of YPAR practices. Yet, there is a notable gap in current research with regards to relational and contextual processes, specifically under conditions in which YPAR projects are taken to scale. In this study, qualitative interviews were employed to critically explore and highlight unique insights in individuals' experiences and decision-making processes within an online web based platform. Specifically, qualitative interviews were employed to solicit students' perceptions of opportunities for communication (relationship development), and access to information or ideas (overall YPAR practices). Interviews have the potential to highlight or clarify why particular behavioral trends occurred within the network.

Qualitative interviews are proposed as a suitable secondary method to this study for several reasons. First, intentional sampling was conducted in order to gather a diverse range of perspectives based on youth's positions within the social network. This has the potential to yield a rich array of data illustrating variation in experience based on youths' positions within the network (see Interview Sampling Procedure below for further details). Second, qualitative interviews offer a private non-judgmental environment for participants to reflect upon and share their unique experiences. Lastly, youth may have difficulty recalling their online activity and decision-making process (commenting on peer's posts, identifying or using a particular YPAR practice). Thus, one on one

interviews offer the opportunity to ask critical questions, probing further into participant's memory and thought processes. In the context of this study, one on one interviews have benefits over focus groups (i.e. group interviews), which run the risk of youth censoring their opinions, or experiencing increased difficulty (i.e. or distraction) in accurately accessing their own memory in comparison to dominant trends and opinions within the group (Creswell, 2007; Marshall & Rossman, 2011; Miles & Huberman, 1994).

Interview Sampling Procedure

With the goal of maximizing variation in key information, purposive sampling was utilized to selectively recruit students from all three schools to capture within group processes (i.e. in each class), as well as variation in action research projects topics. Furthermore, each group of students (i.e. 4 recruited from each school) was selected based on variation in civic participation (high vs. low) and degree centrality (high vs. low). Civic participation was determined utilizing a median split (see chapter 5 for specific details regarding the measure). Thus, two students from each school (i.e. 3 schools) rated high in civic participation, whereas two rated low in civic participation. Additionally, each group of students (N = 4) within each school was strategically selected based on his or her degree centrality. Students' degree centrality in the social network was determined, by calculating social network of centrality of students in March. This measure of centrality combined both sending (i.e. out-degree) and receiving (i.e. in-degree) Facebook communication. The measure was calculated by summing an actor's all existing in-degree ties and all existing out-degree ties. Thus, two students rating a standard deviation above and two students rating a standard deviation below the degree

centrality score from each school were selected. This sampling frame provided the opportunity for within and across subgroup comparisons. For instance, data analysis examined similarities and differences in narratives between students in groups of high and low civic participation, as well as degree centrality. If there were a number of potential interviewees from each school who varied in both civic participation, and degree centrality, I then recruited interviewees that varied in both race and gender.

Participant Recruitment

In order to complete survey and interview measures, student participants provided parental consent and student assent (see Appendix B). Verbal consent over the phone was obtained to parents who indicated concern regarding U.S. citizenship (See Appendix C). Students were recruited to complete survey measures and key informant interviews. As previously mentioned, Facebook network data was collected from all students active on the site. Network data collection complies with the ethical guidelines for use of secondary participants (Klovdahl, 2005), and was approved by both the school district and Michigan State University IRB. Site coordinators also filled out consent forms in order to report demographic data on secondary participants (See Appendix D).

To obtain enough participants for the study, several tactics were employed. First, an introduction letter co-developed by the assistant director and myself was distributed to parents and students introducing them to the study in November of 2013. Second, I arranged with site coordinators times to visit the classroom and make announcements during December of 2013. Third, participants received food during both in-person survey distribution sessions. Lastly, $10 Starbucks gift cards were given to youth who completed all aspects of the data collection (i.e. both surveys, and key informant interviews).

During data collection participants were reminded of the purpose of the study, their rights to stop the study at any point in time, and that the results of the study would not be presented in a manner that identifies individual students. For example, this study would not highlight specific demographic factors of students whom occupy the minority position. Students recruited for key interviews were also reminded of their rights prior to their interview. In the section, below data security procedures are discussed in detail.

Data Security Procedure

All survey data into was entered into a password secured excel sheet. An undergraduate assistant (trained in quality checking) reviewed all survey data entry. Survey data was then linked to network data. A unique ID number was given to all primary and secondary participants connecting survey responses to participant's position within the online social network. All names from the paper survey were de-identified, and parent consent and youth assent forms were stored in a separate cabinet. Interview audiotapes were uploaded onto a password-protected computer. Interviews were personally transcribed, and undergraduates provided an external check for transcription by comparing the audiotape to the transcript. When data analysis was completed all audio data files were erased. In the proceeding section, descriptive information regarding the study's setting and site are discussed.

Study Sample

The total participant sample consisted of 54 students. Furthermore, there was a similar percentage of participants from each of the three schools (School A N = 19 (35%), School B N= 16 (30%), and School C N= 19 (35%). The sample included 37% Hispanic or Latino, 33% Asian, 13% Black/African-American, and 7% White, 6% other,

2% Native Hawaiian/other Pacific Islander, and 2% American Indian/Alaska Native students. Slightly more than half of the students in the sample are male (54%). 50% are juniors, 33% are seniors, 9% are sophomores, and 7% are freshmen (To see a further break down of race/ethnicity, gender and grade by school see Table 1 below).

Table 2. Demographic Comparisons between Schools

Demographics	School A	School B	School C
Race & Ethnicity			
Native American	0%	6%	0%
Asian	52%	19%	26%
African-American	11%	19%	11%
Latino(a)	21%	31%	58%
Pacific Islander	5%	0%	0%
White	0%	25%	0%
Other	11%	0%	5%
Gender			
Male	21%	77%	64%
Female	79%	33%	46%
Grade			
Freshmen	0%	13%	11%
Sophmore	11%	0%	16%
Junior	47%	58%	37%
Senoir	42%	16%	37%

Note: N = 54 Students

Interviewee Sample

Interviewees consisted of 12 students. Four students were successfully recruited from each school. Each group of 4 students within each school consisted of two who rated high, and two who rated low in degree centrality (1 SD above the mean M = 1.95, SD = 2.82, and rating 0 for below), as well as two who rated high, and two who rated low in civic participation (based on median split .18). Thus, interviewee sampling was successful in achieving variation. Seven of the students were male, and five were female. Furthermore, 6 of the students were Asian, 5 were Hispanic/Latino (a), and 1 was Black/African American (For further visual illustration of interviewee sample see Table 2).

Table 3. Interviewee Sample

Criterion	Number of Participants
Schools	School A = 4 School B = 4 School C = 4
Degree Centrality	High (1 SD Above) = 6 Low (1 SD Below) = 6
Civic Participation	High (1 SD Above) = 6 Low (1 SD Below) = 6
Gender	Male = 7 Female = 5
Race/Ethnicity	Asian = 6 Latino(a) /Hispanic = 5 Black/African American = 1

Chapter Five: Study One Methods, Results, and Discussion

This chapter will focus on study one -- examining communication trends among students within the online platform and will consist of four components: (1) a discussion of data collection measures, (2) the data analysis plan, (3) network and qualitative results, and (4) implications for future research and intervention design.

Data Collection Measures & Variables

The in-person survey was administered in January 2014. The survey was used to gather data on the following variables: (1) demographic questions (i.e. race/ethnicity, gender, and school), (2) social group identification, and (3) civic participation. As noted in Chapter 4, network snapshots were taken for January, March, and May. Key informant interviews were also conducted in May.

Independent Variables - Race, Gender, & Geographic Space

The survey included a number of demographic questions, which served as independent variables for the analysis stage. Students answered demographic questions regarding their racial or ethnic background. Racial and ethnic categories were based on United States Census data (2013) specific to the city in which the district was located. Site coordinators provided demographic data regarding students whose parents did not provide permission (i.e., secondary participants) or who were absent during the in-person survey.

Students also answered demographic questions regarding their gender (i.e. male, female, or other), and what school they attended (i.e. of the three). Site coordinators filled out a brief one-page survey concerning the demographics of each student absent from the classroom (For view this survey see appendix E for In-Person Site Coordinator Survey).

The organization participating in this study heavily focuses the first unit of their course on adolescents' racial, ethnic and gender identity formation. Therefore, site coordinators were excellent informants on student demographics in that they have unique insight into students' racial and gender identity based on classroom activities and critical group discussions.

Independent Variable - Social Group Identification

The social group identification questions consisted of students reporting belonging to a particular group (i.e. groups) they identified or perceived as their group. Fujimoto and colleagues (2013) developed this question by collaborating with a group of high school located in an urban school district within Southern California. First, the research team reviewed the existing literature regarding social groups identified within adolescent high school populations. Next, they solicited high school students' feedback, specifically regarding terminology, inclusiveness of all social groups within their school, and applicability of the social groups (Fujimoto et al., 2013). This survey was deemed an appropriate form of measurement as it was developed with youth in a somewhat similar geographic region, to the location of the current study (i.e. diverse urban school district located in California).

Independent Variable – Civic Participation

The final section of the survey measured civic participation. A Likert scale was utilized to assess youth history and frequency of civic participation in their schools and communities. The scale consisted of 30 items, with scores consisting of "0" (you never did this), "1" (you did this once or twice), "2" (you did this a few times), "3" (you did this a fair bit), and "4" (you did this a lot). Items were averaged across for a total score.

This scale was adapted from Pancer, Pratt, Hunserber, and Alisat (2007) who tested the validity of the scale on high school youth populations. Past application of the scale indicated high internal consistency with a high Cronbach's alpha (.90 for time period 1, and .88 for time period 2). In this particular sample, there was also a high Cronbach's alpha ($\alpha = .90$). (To view the survey, see Appendix F).

Communication Patterns - E-I indices

E-I indices were calculated for each network snapshot (i.e. January, March, & May) using four specific group variables (i.e. school, gender, race & civic participation)[4]. The E-I index measures the extent to which communication within the network is mostly within-group or between-groups, as indicated by a specific group variable (e.g. race/ethnicity, gender, school, or civic participation). For civic participation, a median split was employed (.18) to group students in similar categories based on high vs. low civic participation. The E-I index was calculated by subtracting the total number of ties between group members from the total number of ties within the group, and then dividing by the total number of ties in the network (Krackhardt & Stern, 1988). The index typically ranges from -1 (all ties in the network are within-group) to 1 (all ties in the network are between groups).

Exit Student Interviews

Semi-structured in-depth interviews were conducted for four students per site (N= 12). Interview questions are open-ended, allowing for an exploratory approach, and opportunity to probe into with whom participants' chose to communicate and why

[4] Social group identification was not calculated for the E-I index, as students tended to identify with a variety of social groups.

(Creswell, 2007). Questions consist of: "*With whom did you choose to communicate? For instance, did you tend to communicate with the same (e.g. with students of the same gender, attended the same school) or different students (students of a different gender, attended a different school)?"* In addition, the protocol also includes questions that explore factors that inhibited communication among students. For example: "*What, if any, barriers prevented you from communicating with students?"* Interviews took from 30 to 50 minutes, and were conducted privately (For further details regarding the interview protocol see appendix G for exit student interviews). In the section below, detail is provided regarding data analysis for both SNA, and qualitative interviews in regards to study one.

Data Analysis

Social Network Analysis

Study one examines students' tendency to form communication ties with students from similar demographic groups (i.e. see Hypotheses 1-4 in Table 3 below). To examine this phenomenon, I used cross-sectional network analyses. For each wave of network data, three E-I indices were calculated to examine communication patterns between and within students based on four different student group variables (i.e. race/ethnicity, gender, school, and high/low civic participation based on a median split). Comparing the magnitude of these E-I indices across monthly waves allowed me to examine if cross-group communication changed between time points, thus identifying whether there was an increase in diverse communication patterns. For example, the E-I index for the school variable was used to examine whether cross-school communication was more common once students have been using the Facebook group for several months.

Furthermore, using Quadratic Assignment Procedure (QAP) multiple regression employing 10,000 permutations, I tested whether sharing the same demographic variables (i.e. race, gender, school, social group identification, and civic participation) predicted whether or not students communicated on the Facebook group. QAP is an alternative method of testing for statistical significance used when traditional standard errors are likely to be biased due to a violation of statistical assumption of independence. Here, the unit of analysis is dyadic and represents each possible pair of students in the Facebook network. The dyadic nature of the data means that each independent variable and the dependent variable are represented as a matrix in the QAP multiple regressions. For the independent variables in this model, I created five matrices indicating the similarity or difference between each pair of students on five demographic variables (i.e. race, gender, school, social group identification, and civic participation). For instance, in the school matrix, I listed "0" to indicate that a pair of students attends different schools, or "1" to indicate that a pair of students attended the same school. The dependent variable represents the presence (1) or absence (0) of a communication relationship in the Facebook group:

$$Y_{\text{Communication on the Facebook Group}} = \beta_0 + \beta_1 X_{\text{SameGender}} + \beta_2 X_{\text{Same Race}} + \beta_3 X_{\text{Same School}} + \beta_4 X_{\text{Same Social Group}} + \beta_5 X_{\text{Same Level of Civic Participation}} + \varepsilon$$

I conducted a separate QAP multiple regression for each time point (January, March, & May). This allowed me to compare the magnitude and significance of each coefficient to see if they differ across time points. Comparing the magnitude and significance of each coefficient across monthly waves allowed me to see if sharing the same demographic variables are more or less strongly associated with communication in the Facebook group in later months.

Facebook data, and demographic data (i.e. race, gender, & school) were collected on all 54 students. One student was missing data regarding social group identification, and civic participation. Thus, their data was dropped from the specific E-I index examining civic participation, as well as MR-QAP results.

Table 4. Study One, Hypotheses & Analysis

Research Questions	Analysis
Do online YPAR social networks look different at different time points? **Hypothesis 1**. Students of a similar race or ethnicity will be more likely to have a communication tie than those who differ. **Hypothesis 2.** Students who attend the same school will be more likely to have a communication tie than those who do not. **Hypothesis 3.** Students who belong to the same social group will be more likely to have a communication tie than those who differ. **Hypothesis 4.** Students with similar levels of civic participation are more likely to have a communication tie than those who differ.	**Cross Sectional Comparisons of E-Index:** Comparing the magnitude of these E-I indices across monthly waves will show the extent of within group and cross-group communication at each time point, thus identifying whether students exhibited diverse communication patterns on the online platform, especially at later time points. **QAP Multiple Regression:** Comparing the magnitude and significance of demographic coefficients across networks will allow me to test whether students are more likely to communicate with students whom they are similar to based on demographic, and behavior variables, and whether this looks different at different time points.

Qualitative Interviews

The analytic procedure of qualitative data from the semi-structured interviews consisted of the following components: (1) organizing the data, (2) bracketing research biases, (2) immersing oneself in the data, (3) conducting inductive content coding analysis, (4) examining within-in and cross-case comparisons, (5) assessing criterion of saturation, and (6) soliciting participant input (Marshall & Rossman, 2011).

First, during data collection, I kept log of the type of data gathered. This log consisted of dates, times, and places where the data was collected. Second, throughout the data collection analysis I engaged in "bracketing". Bracketing encompasses identifying and noting one's own perceptions, and positionality (Creswell, 2007; Marshall & Rossman, 2011). Bracketing is conducted in order for the researcher to recognize and identify personal biases prior to even engaging in data interpretation and analysis (Creswell, 2007; Marshall & Rossman, 2011).

Third, I fully immersed myself in the data. I took field notes directly after data collection, reviewed audiotape interviews, and transcribed all interviews. Interviews were then quality checked by an undergraduate research assistant. Interview transcriptions and field notes will be uploaded, stored and analyzed using Nvivo (Nvivo Version 10, Richards, 1999). Nvivo was selected, because it provided the opportunity to construct various matrices to help visualize cross case and within case comparisons (see below for further details).

Next, qualitative interviews consisted of an inductive content analysis approach (Patton, 2002). First, data was organized by research question. Then, I identified "sensitizing concepts" (Patton, 2002). Sensitizing concepts highlight content and specific areas of interest to the study. An example of a sensitizing concept for the first research question might include: factors that attract or inhibit a student from commenting on other student's posts. These concepts are then organized into "bins" (large clusters). I then reviewed each bin, and identifying first-order themes. Next, I re-grouped first order themes into second order themes at a meta-level. This coding level allowed me to summarize the main findings, and highlight the overall story within the data. For

example: *what were student's perceptions of communication within the online Facebook group, and what can be done in future online efforts to better facilitate and support communication among students?* First order themes could potentially consist of factors that promote communication (e.g. familiarity or comfort with students they knew in-person), or barriers in communication (e.g. fear of the unknown or misinterpretation from students attending other schools), and then regrouped into second order themes based on their meaning and application (e.g. same school environment). First and second order themes were then merged together to create a final coding framework (see Appendix H).

Fifth, cross case and within case analyses were constructed (Miles & Huberman, 1994). Using the first and second order themes described above, a cross–case thematic analysis was conducted examining all participant data. A series of data matrices were constructed. Particular attention will be paid to characteristics specifically mentioned above in the proposed sampling plan: school, gender, level of civic participation, and degree centrality (high vs. low). Rows within the matrix will be entered based on these demographic factors, themes will were then entered into the columns (See Table 4, for Visual Illustration). Matrices further allowed me to visualize and inspect potential themes (Miles & Huberman, 1994). The second aspect of this approach (Patton, 2002) consists of conducting a within case study. Patton (2002) notes the importance of selecting cases that highlight differences among the findings. This analysis will focus on highlighting three case studies, each representing an individual student's experience at each individual school site. These case studies provide a thick and detailed descriptions of students engaged in different action research projects, and were utilized to inform the study

findings. Although case studies will not be explicitly addressed in the chapter, they are included in the appendix (see Appendix I).

Table 5. Communicating with Other Students

Demographics	Second Order: Factors that Promote Communication		Second Oder: Factors that Hinder Communication	
	First Order: Similar Interests	First Order: Appears Friendly	First Order: Inside Jokes with Other Students	First Order: Appears Standoffish
School 1				
School 2				
High Degree Centrality				
Low Degree Centrality				

Sixth, in qualitative research saturation occurs when the interviews cease to yield new information (Creswell, 2007; Patton, 2002). In this study, saturation was examined when interviews begin to provide similar narrative with no new themes emerging. Field notes identifying new information, and ideas were kept throughout the interview process to identify points where information become repetitious or ceases to produce any novel ideas. Furthermore, after coding, prevalence for each theme was documented. In addition, systematic analysis of the data will be conducted to assess at which point the data begins to return no new themes (Guest, Bunce & Johnson, 2006). In this study, no new themes emerged after the fourth interview. Lastly, the organizational director and teachers were solicited for their input regarding the qualitative data analysis in order to ensure trustworthiness of the data by soliciting outside perspectives (Colaizzi, 1978; Creswell, 2007; Patton, 2002). Both the organizational director, and teachers confirmed the themes identified in the analysis.

Combining Qualitative & Quantitative Results

Qualitative data can illustrate trends in factors that facilitate or hinder online communication between students. These factors may be tied to actor (e.g., network position and demographics) or dyadic attributes (e.g. a pair of actors attending the same school) indicated in quantitative analysis. Qualitative content analysis explored specific factors promoting or inhibiting online communication between students. One well-known method for transforming data in mixed method research is through "quantitizing data" (Tashakkori & Teddlie, 1998; Whittemore & Knafi, 2005). Quantitizing data involves transforming qualitative data into numerical form (Onwuegbugzie & Disckson, 2008).

To test each hypothesis, themes will be coded in regards to either promoting or as a barrier thus hindering the tendency to communicate with other students. Graphs were developed indicating the percentage of themes mentioned across interviews. These visual graphs provide further information regarding what particular factors converge with or diverge from the quantitative network findings (Onwuegbugzie & Disckson, 2008). For example, if social network analysis results indicated that students are more likely to communicate with students whom attend the same school, qualitative results may indicate a high frequency across school sites of students who report a higher likelihood of communication with others from the same school. Qualitative data can then be used to provide corroborating evidence along with explanations for student preferences (provided through illustrative quotes). Alternatively, if qualitative results indicate low frequency in students reporting a greater overall tendency to communicate with students from the same school, and this information contrasts with the quantitative network results, additional explanations might exist. For instance, qualitative interviews may indicate that students

articulate being more likely to communicate with close friends in their class. Yet, students did not indicate a higher likelihood of communicating with their classmates overall, compared to students from other schools. This could indicate the existence of a finer-tuned attribute of friendship, which could be helpful in future analysis dealing with patterns of communication. In the section below, the results of both the social network findings, and qualitative themes are presented in regards to study one.

Results

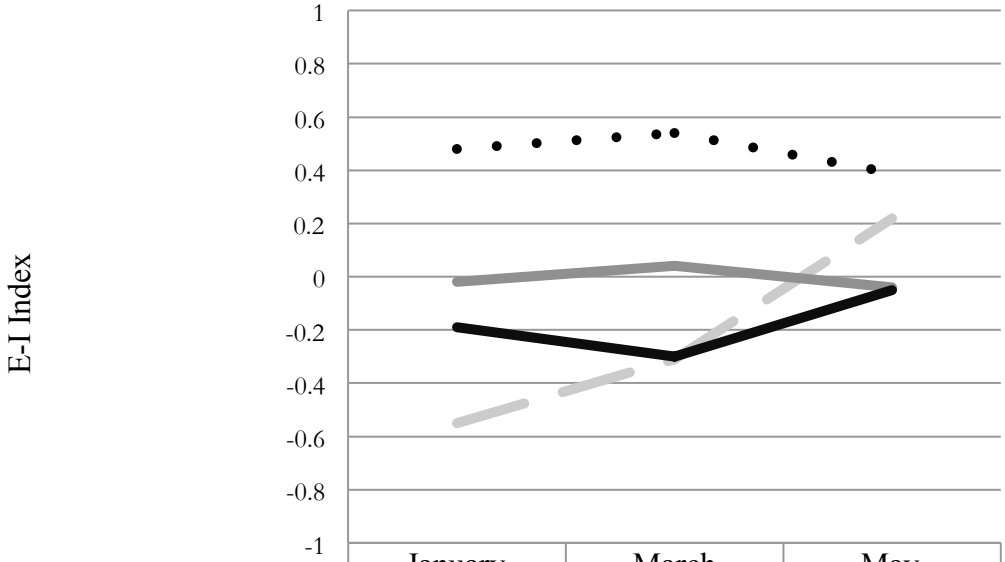
Social Network Results

When examining E-I indices, there were consistent patterns with respect to race across time points. At each time point, students tended to communicate more frequently with students of a different race. E-I indices ranged from .39 to .54 across the three time points. Furthermore, students did not appear to display a preference for communicating with same gender peers in the online platform, with E-I indices ranging from -.02 to .04.

More notable changes in communication emerged with regards to school, and civic participation. In, January, students appeared to communicate more frequently with other students from the same school (-.55). This persisted in March although to a slightly lesser degree (-.31). By May, students communicated more frequently with students from different schools (.22). Similarly, students communicated more frequently with peers who indicated the same level of civic participation as themselves (i.e. high vs. low) in January (-.19) and March (-.30). However, in May students tended to communicate evenly with peers whether they indicated the same or differing rates of civic participation (-.05). For a visual illustration of the E-I Indices see Figure 2 below.

Results from the QAP multiple regression analyses were consistent with the E-I indices. Race remained an insignificant predictor for communication across all time points. QAP multiple regression results for gender indicated a heterophily effect that decreased in later months. In January, students were much more likely to communicate with a student if that student was of the opposite gender (B = -.03, p < .01). This pattern continued in March (B = -.05, p < .00). By May, however, being of the opposite gender was no longer a significant predictor for communication within the online platform (B = .00, ns)

Figure 2. E-I Indices



	January	March	May
School	-0.55	-0.31	0.22
Gender	-0.02	0.04	-0.04
Race	0.48	0.54	0.39
Civic Participation	-0.19	-0.30	-0.05

In January, students from the same school were significantly more likely to communicate with one another on the online platform (B = .31, p < .00). This finding persisted in March (B = .18, p < .00). Yet, by May, attending the same school was no

longer a significant predictor of communication within the online platform (B = .00, ns). Social group identification was a significant predictor of communication at the beginning of project, students whom identified with the same social group were much more likely to communicate within the online platform (B = .07, p < .05). However, social group identification became an insignificant predictor from March onward (For visual illustration, see table 5 for MR-QAP results below). Results for civic participation showed a similar pattern as school attendance. In January, students indicating the same level of civic participation were significant more likely to communicate with one another within the online platform (B = .05, p < .05). This finding persisted in March (B = .07, p < .00). However, by May, having the same level of civic participation was no longer a significant predictor for communication within the online platform (B = .01, ns).

Table 6. QAP-Multiple Regression Results

	January (B)	March (B)	May (B)
Gender	-.03 (.01)*	-.05 (.01)**	.00 (.00)
Race	-.02 (.02)	-.04 (.01)	.00 (.00)
School	.31 (.01)***	.18 (.01)***	.00 (.00)
Social Group	.07 (.02)*	.02 (.02)	.02 (.00)
Civic Participation	.05 (.01)*	.07 (.01)***	.01 (.00)
R^2	.10 ***	.04***	-.001

Note: p < .05*, p< .01**, p< .00***

In sum, the E-I indices and QAP multiple regression results both indicate more communication across different schools and different levels of civic participation at later

time points. At the beginning of the project, students were more likely to communicate with other students from the same school. Therefore, findings partially support **Hypothesis 2**. Yet, by May, sharing the same school environment was no longer a significant predictor of communication between students. Thus, the online platform may have increased cross-school communication over time, as students became more comfortable communicating with students from different schools. Furthermore, students at the beginning of the project were much more likely to communicate with other students rating similarly in civic participation. Thus, results partially support **Hypothesis 4**. This trend was no longer a significant predictor of communication by May. Therefore, students' comfort in engaging with other students from diverse backgrounds and experiences may have expanded over time. Qualitative interviews can help further illustrate students' decision-making process for selecting communication partners within the online platform, and whether this changed over time.

Qualitative Results

Qualitative interviews illustrated a variety of factors associated with how students decided whom to communicate with on the online platform. First, interviewees reported tending to communicate more frequently with students who were in the same school, which is partially consistent with quantitative findings in January and March. Second, students tended to communicate with other students based on the content of what they were posting. Specifically, students displayed a tendency to comment on posts that they could relate to, or that resonated within their own lives. Third, students tended to communicate with other students whom posted comments that actively solicited and welcomed feedback and/or advice from others on the Facebook Group. Lastly, students

tended to communicate with other students whom utilized social media. (For visual illustration of qualitative results see Table 6).

Table 7. Communication Themes

	Total	School			Gender		Civic Participation		Degree Centrality	
	N=12	A N=4	B N=4	C N=4	Male N=7	Female N=5	High N=6	Low N=6	High N=6	Low N=6
Facilitators: Same School	75%	3	3	3	4	5	5	4	6	3
Barriers: Avoiding Discomfort	50%	3	1	2	5	1	1	5	2	4
Facilitators: Relevance	83%	4	3	3	5	5	5	5	6	4
Barrier Vague Posts	50%	3	1	2	2	4	4	2	4	2
Facilitators: Soliciting Feedback	58%	3	2	2	2	3	3	4	2	5
Facilitators: Social Media	67%	3	2	3	3	5	6	2	5	3

Finding One: Same School

Nine of the twelve interviewees articulated tending to communicate more frequently with their classmates on the Facebook group in comparison to students from others schools. Students mentioned that it was easier to share ideas with their classmates. For instance, there was a greater understanding among classmates regarding the social issues covered by their projects as well as the anticipated plan of action. Students also expressed feeling more comfortable communicating with their classmates. They noted that their classmates understood where they were coming from. Furthermore, students

articulated that the process of engaging in the YPAR project fostered deeper feelings of mutual understanding among classmates. "*I only commented on my classmates' posts. I mean we've gotten to know each other. We did a lot of stuff together, talking about our lives. I already knew what their stuff was about, so it was much easier to look at the ideas that they posted"* (Student Interviewee, School C, Low Civic Participation, & High Degree Centrality). This narrative was evenly dispersed across all three schools. Three out of four interviewees from each school (i.e. 75%) reported that attending the same school increased their likelihood of communicating with those students within the online platform (See Figure 3 for visual illustration). Notably, female interviewees were more likely than their male counterparts to indicate that attending the same school increased their likelihood to communicate on the Facebook group (100% vs. 57%) (See Figure 4 for visual illustration). This trend was relatively evenly dispersed with regards to students varying in civic participation (i.e. 83% high vs. 67% low) (See Figure 5 for visual illustration). Yet, students with low degree centrality (i.e. not communicating with the larger proportion of students on the Facebook group) were less likely to articulate that communicating with students from the same school was a facilitator that increased their communication on the Facebook group (i.e. 50% low degree centrality vs. 100% high degree centrality) (See Figure 6 for visual illustration). Notably, overall these students may have been less active on the Facebook group, and thus didn't tend to communicate frequently with anyone.

One prominent barrier to students' communication was their concern that the interaction felt unnatural, and would cause potential discomfort. Students expressed concern in not knowing how students from other schools would perceive their comments.

"*It all goes back to the awkwardness. I thought that they would be like 'oh, you didn't even go to my school, why are your commenting on this?'"* (Student Interview, School C, Low Civic Participation, & High Degree Centrality). Students also noted that written text could be misread, or misinterpreted.

> *I get sensitive really easy. So, I'm scared to like post what I really want to say, because I don't want the other person to take it the wrong way. When you write something-you can't see how they're saying it. If I say- write something, maybe I won't notice that I'm giving attitude* (Student
>
> Interview, School B, High Civic Participation, & High Degree Centrality).

In an effort to avoid confusion or tension, interviewees articulated reserving most of their comments for their classmates. For instance, 3 out of 4 students (75%) from School A noted that they tended to avoid potentially discomforting interactions, which served as a barrier to their online communication (For visual illustration see Figure 3). Furthermore, male students (71%), students whom rated low in civic participation (83%), or students who rated low in degree-centrality (67%) were all more likely to identify avoiding discomfort as a barrier hindering communication in the online platform (For visual illustration see Figure 4,5,6).

Communication between students in the same class did provide students with the unique opportunity to be exposed to different viewpoints, and engage in richer discussions. For example, a student from School A articulated how the Facebook group became a platform to explore classmates' differing views and experiences with regards to their social issues (i.e. school counselors).

> *The activity when we posted about our counselors, and how we felt about them. I think that really helped, because we got to see how we each thought. We all kind of have different eyes of how we view counselors, like our opinions aren't exactly the same. I saw different people's perspective, and how they felt about the situation* (Student Interview, School A, Low Civic Participation, & High Degree Centrality).

Furthermore, interviewees expressed surprise in what certain classmates articulated, or shared on the Facebook group when it differed from their behaviors in class. *"Sometimes, I read things that my classmates wrote about, and I thought 'oh, I didn't know that this person could think this deeply about this'"* (Student Interview, School B, High Civic Participation, & High Degree Centrality). Thus, the Facebook group appeared to provide classrooms with a unique platform to further explore, and discuss issues among students within the same YPAR group. This discussion appeared to vary in quality, and format from in-person interactions. Students reported that the Facebook group enhanced classroom dynamics, facilitating greater understanding of different perspectives, and providing a new outlet for students to express their opinions. Interviewees identified this discussion as being critical during the problem identification stage of the project (January), when classmates were sharing their perspectives and determining a social issue. They found this type of discussion to be less critical during the action stage of the project (May). Therefore, within school communication may have been perceived as most beneficial for students at the early stages of the YPAR project, and less so at the end of the YPAR project.

Finding Two: Relevance

Ten out of the twelve interviewees noted that they tended to comment on students' posts, which they deemed as '*relevant'*. Students described these posts as catching their interest, in that they resonated with some aspect their own lives. Relevant posts at times promoted communication between classmates on the Facebook group (for instance, discussing challenges and frustration with their project). Notably, students were more likely to share similarities with classmates' posts, as they focused upon social problems they were currently addressing. Yet, posts also touched students attending different schools, promoting cross-communication between schools. Students discussed finding other school's social issues interesting. In particular, students were drawn toward posts that highlighted challenges to which they could relate. For example, one student reported being personally moved by a post from a student at another school that focused on depression. *"That depression post related to me, because I felt like I was in that state. And I personally thought, 'wow, this post you can relate to'. Because, I have been there, and I can't blame them"* (Student Interview, School A, High Civic Participation, & Low Degree Centrality).

Furthermore, students also noted similarities between challenges occurring at other schools and those transpiring within their own school.

> *I think there was one post about how the counselors don't have time. How it's really hard to get things done, when you actually need to talk to a counselor, and you aren't able to talk to them. And that was one of the posts that I could actually kind of relate to, because I know my counselor is super busy with other students.* (Student Interview, School C, High Civic Participation, & Low Degree Centrality)

Students identified that more descriptive and expressive posts were, the easier it was for them to make a personal connection to the content. *"The frustration that I got out of the, the message, that really caught my attention, because I know how frustrating it is"* (Student Interview, School C, High Civic Participation, & High Degree Centrality). It appears the greater detail and personal disclosure provided in posts, the easier it was for students to relate to the author's perspective. "*Someone was talking about depression. And I was like 'whoa that's really deep', they were just open to post that, like they were didn't really care what people thought"* (Student Interview, School A, Low Civic Participation, & High Degree Centrality).

In a similar vein, students reported not being able to comment on posts to which they could not relate. This often occurred regarding posts from students in different schools, in which case students felt certain posts were ambiguous, or they didn't have enough information regarding the particular social issue. "*Because when they describe it, they know what is exactly happening in their project, but to someone who's reading it from an outside perspective it is kind of hard to grasp what exactly they are doing, and how it's going" "* (Student Interview, School A, High Civic Participation, & High Degree Centrality). Since students didn't fully understand or relate to the social issue, they often felt they couldn't provide any insights or offer advice. *"Sometimes, it was hard to make a lot of comments on things. Because some things, you're kind of like, this isn't really something that I have to deal with. It was kind of difficult to be sympathetic, with others when you don't really understand it"* (Student Interview, School A, Low Civic Participation, & High Degree Centrality). Students from School A tended to report vague posts as being a barrier in communicating within the Facebook group having (75%),

compared to students from School B (25%) and C (50%) (See Figure 3 for visual illustration). This may have been due to variation in academics in that School A was a high performing school with stringent standards. *"At School A we have a high standards. I mean some people are taking like 8 AP classes. I mean I couldn't speak to some of the stuff going on at School B or C. But that might be because I didn't always understand them"* (Student Interview, School A, High Civic Participation, & Low Degree Centrality). Students from School A notably reported having a harder time communicating with students from School B or C. Some of the interviewees from School A reported having a harder time understanding the content, or phrases employed by students attending School B and C. "*Sometimes it was difficult to understand students from School B or C. Maybe they were inside jokes, I just didn't get it? I wish they had been a bit clearer"* (Student Interview, School A, High Civic Participation, & Low Degree Centrality). Additionally, interviewees with high civic participation reported vague posts to be a hindrance (i.e. barrier) in their ability to communicate within the online platform (67% high vs. 33% low) (See Figure 5 for visual illustration). Thus, students with the same level of civic participation may have been better able to relate to one another's posts, as the content was specific to activities and experiences they had personally engaged in. Students with high degree centrality were also more likely to report vague posts to be a barrier, decreasing their likelihood to communicate within the Facebook group (67% high vs. 33% low) (See Figure 6 for visual illustration). This may have been due to these students being more active on the Facebook group, and thus being able to identify patterns or circumstances when they couldn't communicate with other students, compared to students whom seldom participated.

Finding Three: Seek Solutions & Advice

Seven of the twelve interviewees noted that they had tended to communicate with students when their posts solicited alternative opinions, or welcomed outside advice. This was especially the case for students communicating from different schools. For instance, posts that posed a general question to the Facebook group, and encouraged feedback, tended to solicit greater cross-school communication. "*I commented if anyone asked a question, 'like what course of action could you take', maybe from an outside perspective, or if it was just a question, and it really was important to them"* (Student Interview, School B, High Civic Participation, & High Degree Centrality). These posts were notably explicit in wanting to engage with other students. Thus, students felt they had a clear invitation to offer their opinion, and generate a conversation with students that they didn't personally know. Furthermore, students were less concerned about having an awkward interaction, since they had a clear topic area and opening to engage other students in discussion.

Several interviewees noted that they wanted to engage other students in a deeper discussion, and enjoyed the opportunity to provide input or ideas. These students indicated that they wanted to be a resource, and not merely provide encouragement. "*What I noticed about my comments. I don't really say cool or interesting. When I read it I go, 'oh that's interesting', but I don't type 'interesting.' I just, I usually only comment, when there is like a question that has to be answered"* (Student Interview, School A, High Civic Participation, & High Degree Centrality). For instance, a student from School A was startled to hear about the health curriculum provided at School B. When a student from School B asked for input from other schools on what materials they were exposed

to, she was quick to offer information on the health curriculum provided at her school, as well as encouraged students to expand their views on health.

> *I commented on what kind of the things do they teach in your health classes? I thought it was really important. One, because I think teenagers really need to know about like their health, and not just HIV prevention, or birth prevention. I remember in my health class they made a huge emphasis on mental, spiritual, and emotional health. I think that is one thing students really have to realize, especially at this age, that it's not just your physical well being that you have to be really careful of, but your mental health, and finding your way into adulthood. I think that is why that caught my eye. If they don't have good health classes, they can't realize all this stuff. And I think I took for granted the health classes at [SCHOOL A], like people think of it as kind of a joke class, but to SCHOOL B it's really important, because they don't have health classes* (Student Interview, School A, High Civic Participation, & High Degree Centrality).

Alternatively, students noted that posts that tended to be more instructional or offer a specific opinion on a social issue left them with little room to engage or open up a discussion. "*I cannot like say anything about it, if you just threw on a conclusion, and put everything into place. Because how do I ask a question, on something that is neatly tied up?"* (Student Interview, School A, High Civic Participation, & Low Degree Centrality).

Three out of the four interviewees from School A (75%) indicated that posts which tended to solicit feedback increased their likelihood to communicate (i.e. respond to questions) on the Facebook group, compared to School B (50%) or School C (50%). (See Figure 3 for visual illustration). This may have been due to School A having a more

challenging time relating to School B and C because of differences in academic and social norms within the school environment (see Chapter 4 for further details on school demographics). Thus, students from School A may have been more responsive to opportunities to communicate with students when their ideas were welcomed or felt they had an opinion they could share. Notably, five out of the six interviewees whom rated low in degree centrality (83%) indicated that when students solicited feedback, this increased their likelihood of communicating on the Facebook group (See Figure 6 for visual illustration). Thus, one factor that may have contributed to these students showing low communication in the Facebook group was that they tended not to communicate with other students unless they were explicitly provided with an opportunity to offer feedback.

Qualitative interviews highlighted that students tended to reach out to other schools during the action stage of their project (May), seeking advice from other students on potential strategies, and solutions. Thus, explicit solicitation and feedback between different schools may have occurred more frequently at the end of the project supporting quantitative findings. Greater solicitation of feedback may have been a result of all three classes converging around the same barrier, limited resources, impacting all of their social problems. Students may have felt more comfortable asking for help, and getting advice from other students when they had a topic in common. Furthermore, during the action planning stage students engaged in discussion, and heated debates with their classmates regarding what next steps to take. Common in organizing meetings these discussions were repetitive, and at times contentious *"We just kept thinking, what could we do, it helped to talk to others"* (Student Interview, School B, Low Civic Participation, & Low Degree Centrality). Out of frustration students may have been more welcoming to

outside or alternative viewpoints. For instance, one interviewee noted being stuck on how to move their project forward and seeking advice from another school. *"I saw them talking about fundraising, and then I started asking questions, we talked back and forth"* (Student Interview, School B, Low Civic Participation, & Low Degree Centrality).

Finding Four: Social Media

Eight of the twelve interviewees noted that they tended to be more likely to communicate with students whose posts employed social media. These posts were diverse, including memes (i.e. comical graphical images), photographs, and video. The most prominent form of social media utilized on the online platform were photographs taken by students, depicting social issues within their school environment. Posts that captured social issues occurring within the school environment generated a lot of interest among classmates. Students enjoyed seeing visuals of everyday occurrences that they could easily locate within their school. They also expressed surprise and interest in what their classmates selected to post, showing particular interest in how their classmates chose to artistically document or represent a social issue with images from their every day school life. For instance, one student from School B expressed her excitement through a post consisting of a photograph from one of her classmates, which documented health concerns regarding the upkeep of the school facility.

> *Student: I loved the post of the dead bird that has been here for like 3 years. When I came in 8th grade, I was practicing soccer, and I would see it. And be like 'is that a bird'? I would always get sad. First, I thought it was stuck and alive, but now I know it is dead.*
>
> *Interviewer: What about that post caught your attention?*

Student: I just would have never thought to post something like that. But, he's right it's gross, they teach us about health. But, how can they when we are learning in a place like this? (Student Interview, School B, High Civic Participation, & High Degree Centrality).

Students also noted that posts, which employed social media, facilitated their ability to both comprehend, and relate to ideas shared from students at other schools. For instance, one student from School A was moved by a picture another student took at School B conveying the feeling of depression. This post used a picture of the ocean to symbolize feelings of loss and turbulence. *"Once, I saw that picture—bam! A memory just came back. I was like, 'wow, this picture just kind of hit me.'"* (Student Interview, School A, High Civic Participation, & Low Degree Centrality). Furthermore, posts, which utilized social media on the Facebook page, stuck out to students instantly, catching their attention, as they varied in format from posts that were simply text. *"The pictures, they caught your attention, and you went to those, rather then a full block of text"* (Student Interview, School B, Low Civic Participation, & Low Degree Centrality). In addition, students noted that the use of social media differed from the materials they were used to engaging with in the classroom, and gave the Facebook group a different feel from their typical course work. *"Pictures make it interesting, and so easy to understand. You don't have to read everything. I mean we're in school all day reading"* (Student Interview, School B, Low Civic Participation, & High Degree Centrality). All six interviewees whom rated high in civic participation (100%), and five out of six whom rated high in degree centrality (83%) noted that the use of social media increased their likelihood to communicate on the Facebook group (See Figures 5 & 6 for visual illustrations). It

appears these interviewees, may reflect individuals who are more drawn to online forms of civic participation and engagement, as well as communicating through various forms of social media.

Figure 3. Prevalence in Factors Supporting Online Communication by School

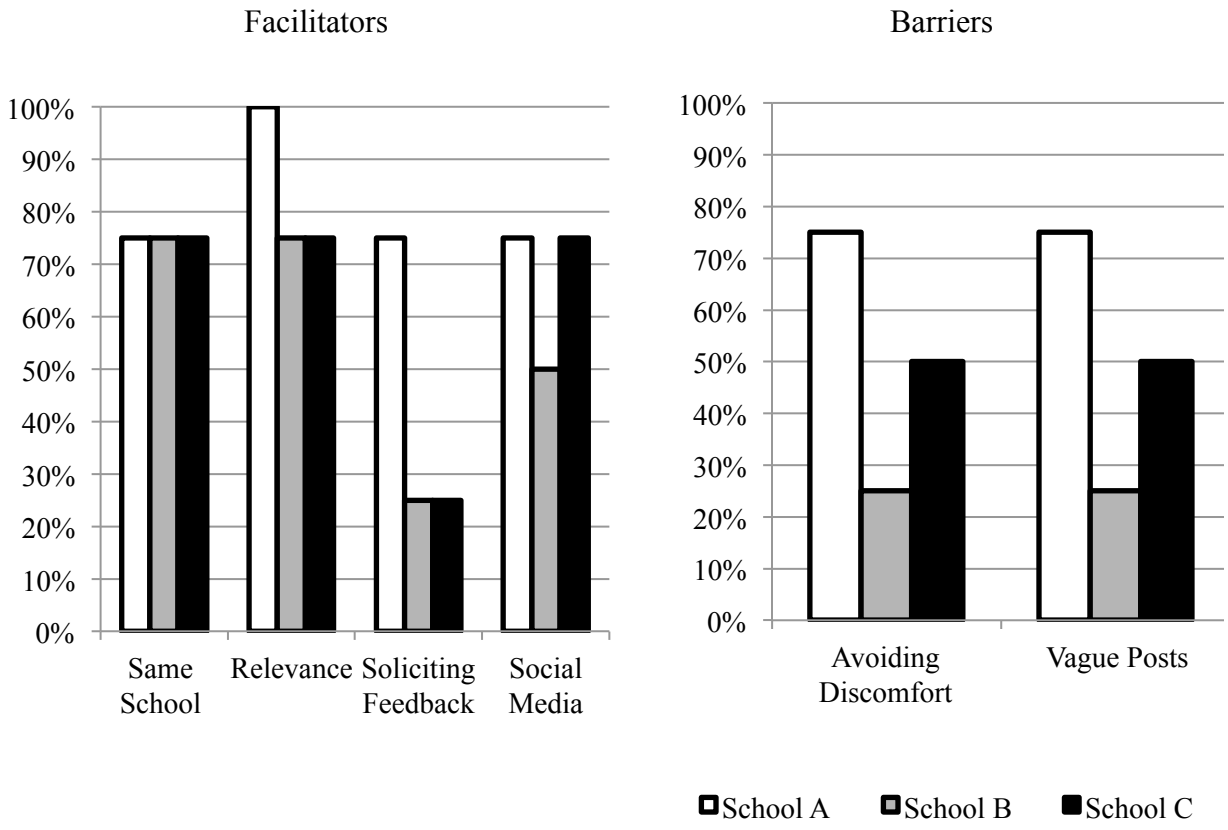


Figure 4. Prevalence in Factors Supporting Online Communication by Gender

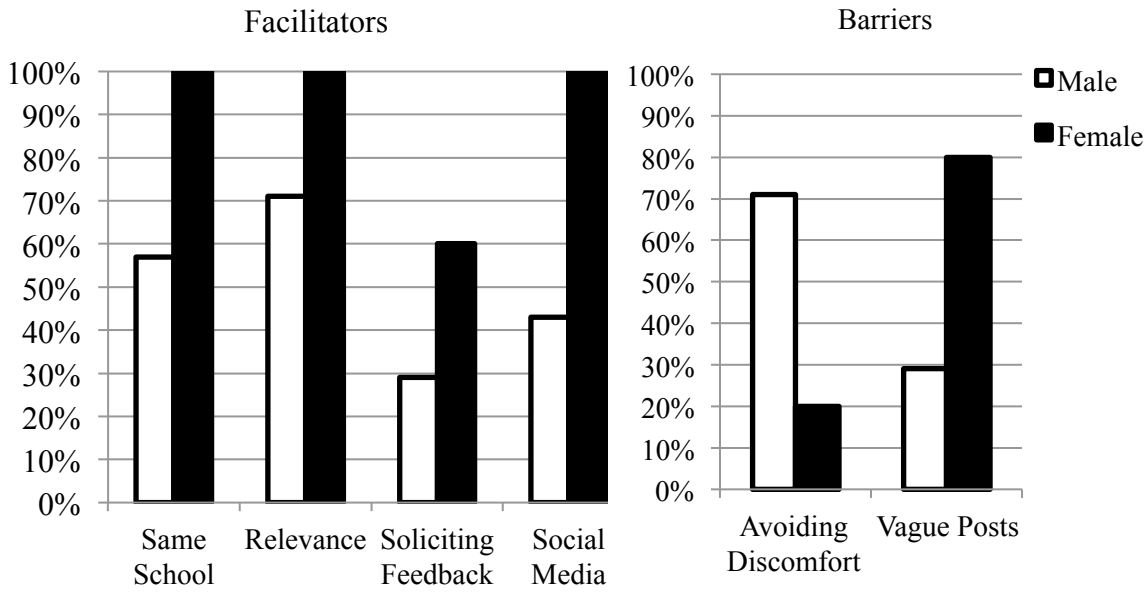


Figure 5. Prevalence in Factors Supporting Online Communication by Civic Participation

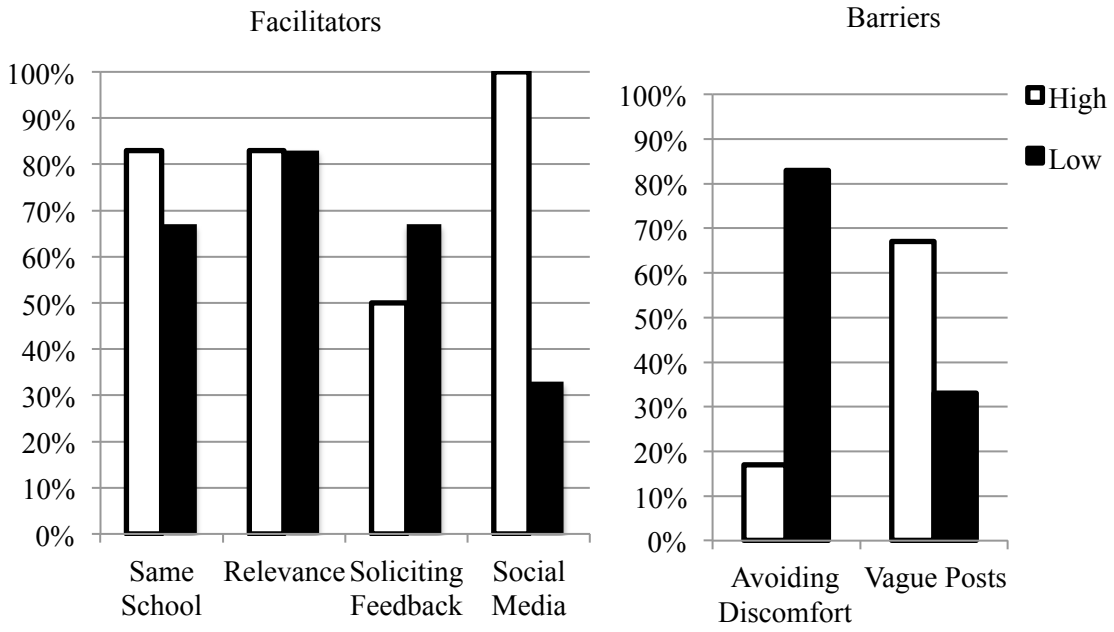
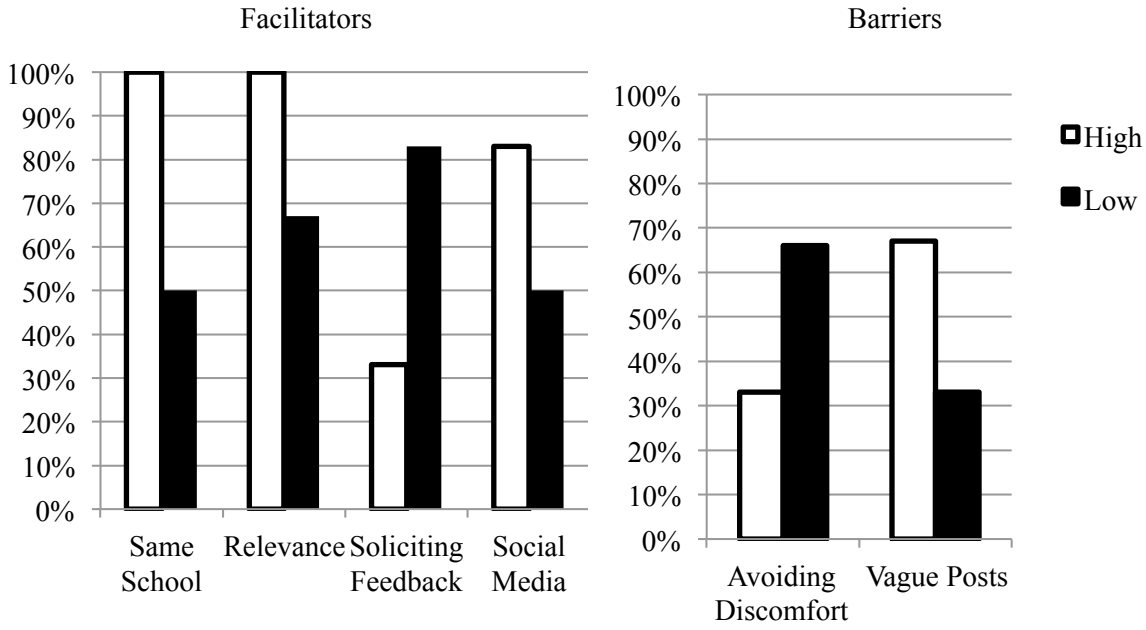


Figure 6. Prevalence in Factors Supporting Online Communication by Degree Centrality



Discussion

This study builds on the existing research on online social networks by exploring patterns of adolescent communication through online platforms (Golder, et al., 2007; Mok & Wellman, 2007; Thelwall, 2009; Wimmer & Lewis, 2010). Consistent with prior findings, results suggest that online communication patterns are influenced by similarities in geographic location (in this study, school) (Mok & Wellman, 2007; Wimmer & Lewis, 2010), as well as civic participation (Adamic & Glance, 2005; Raynes-Goldie & Walker, 2008). Therefore, findings partially support **Hypothesis 2** and **4**. In contrast to prior research (Backstorm et al., 2001; Christakis & Fowler, 2009; Liu, 2007; Thelwall, 2009; Urberg et al., 2000; Wimmer & Lewis, 2010), results indicate that online communication patterns are not influenced by race, gender or social group identification. Therefore, findings from the current study do not support **Hypothesis 1** or **3**. In regards to race, there

may have been more diverse communication between different racial groups as a result of the schools being demographically diverse. Thus, students may have been more likely to communicate with other students from the same school, therefore increasing their chances of communicating with students of a different racial or ethnic background. Interestingly, while communication between different schools increased from March to May (-.31 to .22), communication between different racial groups dropped from March to May (.54 to .39). Alternatively, findings may have also deviated from previous studies in that demographic features and social groups identification may have been less salient within the online platforms. For instance, qualitative interviews indicated that students tended not to notice the online profile of the students they communicated with, especially when talking to students from other schools.

Most importantly, however, online communication patterns tend to look different at different time points. Specifically, there was greater cross-communication between schools, as well as levels of civic participation as the YPAR project progressed (i.e. in the May time point). Network results highlighted students' tendency to have more communication with other students from the same school on the Facebook group during early stages of the YPAR project (January to March). These results provide support for Social Impact Theory (Latané, 1981), which indicates that physical proximity is a vital component of social interaction. Research has indicated that physical and psychological closeness are interrelated (Latané, 1981). In other words, the more time individuals spend together within a shared location (i.e. classroom, school, etc.) the more likely they are to form personal relations with one another (Back et al., 2011; Hall, 1966; Latané, 1981). Qualitative interviews conducted for this study further corroborated this trend, in that

students indicated feeling more comfortable talking to their peers, which mirrored their every day interactions, and used the online platform to further enrich their in-person discussions. Results highlight the potential use of the Facebook group in reinforcing positive relations within the classroom environment, as well as supporting the problem identification stage of a YPAR project in which students use the online platform to solicit multiple perspectives, engage in further discussion, and identify similarities between one another's collective experiences.

Findings also revealed similarity in levels of civic participation to be a positive predictor of online communication ties. Students with similar levels of civic participation tended to have more communication with one another between January and March. In addition, qualitative findings highlighted that students tended to communicate with other students who had similar experiences within their schools and communities. The findings of this study suggest that youth may be more likely to communicate with youth whom share similar politics, or levels of civic participation within online adolescent networks. Findings mirror the conclusions of previous studies of adult online social networks, which also identified trends in communication with regards to political activity and experience (Adamic & Glance, 2005; Christakis & Fowler, 2009). Communication between groups with varying levels of civic participation increased as the YPAR project progressed, highlighting how the online platform may act as an intervention promoting diverse communication across students with differing levels of civic activity. Online YPAR platforms offer the unique opportunity to build diverse communication ties between youth with varying levels of civic participation. These unique communication ties foster opportunities to intentionally engage less civically engaged youth with peers

whom are actively civically engaged, and thus may help reduce potential disparities in civic participation.

Although initial communication ties were homophilous with regard to school and civic participation, network results did indicate more communication between students in different schools and at different levels of civic participation at later time points in the study (i.e. May). Qualitative findings indicate that a rise in direct requests of outsider perspectives on the Facebook group may have been a factor in promoting greater communication between schools and among students with different experiences (i.e. varying levels of civic participation). A potential explanation for this change in communication is that it took time for students to utilize the online platform as a tool to communicate with a more diverse group of students. This explanation would be consistent with traditional diffusion literature, which indicates that initial adoption of an innovation takes time (Dearing, 2008; Rogers, 1962; Strang & Sole, 1998). Alternatively, all three projects identified limited resources as a barrier during their social action stage. Overlap regarding a common issue may have promoted more diverse communication within the online platform, as students were better able to relate to one another and make suggestions. This finding is supported by the youth organizing literature, which has indicated that engaging young people in social change can promote diverse relations among youth from differing backgrounds (Christens, & Dolan, 2011, Christens & Kirshner, 2011; Kirshner, 2009).

Implications for Future Research

Future research should continue to explore online communication patterns among diverse YPAR projects. Studies in this vein will clarify communication among and

between distinct YPAR groups, as well as identify contextual factors that promote diverse communication between youth. In particular, continued research will be useful in the following three areas: (1) longitudinal social network modeling, (2) exploring variation in setting contexts, and (3) considerations regarding additional measures of civic participation specific to online activity.

The cross-sectional nature of the analyses in the current study limits the ability to determine causal relationships between similarity between students and the presence of communication ties. In this study, I calculated and described E-I indices and QAP-multiple regression results at distinct time points. Longitudinal social network analysis can provide the opportunity to test and compare changes in communication as result of network features and characteristics of pairs of actors (i.e. gender, race, etc.) over time. For example, longitudinal social network analysis can test aspects of reciprocity, in which students may have been more likely to communicate over time with a student whom initiated communication. Longitudinal network analysis operates under the assumption that at least 30% of the relationships in a social network remain consistent over time. For this particular sample, communication patterns were not stable over time.[5] This study utilized "comments", "likes" and "tags" to indicate communication ties within a network. This particular operationalization of communication may have been more fleeting, as qualitative findings indicated the content of the post tended to solicit feedback rather than the particular student him or herself.

[5] Jaccard similarity coefficients were used to examine the stability of relationships between consecutive time points of network data. Jaccard similarity coefficients are calculated by dividing the number of present relationships that are reported in both networks by the total number of present relationships that are reported in either network. Scores range from 0 (no overlap in relationships across the two networks) to 1 (100% overlap in relationships across the two networks). In this sample, Jaccard similarity coefficients ranged from 0 to .08.

Future research endeavors ought to solicit greater teacher support in encouraging students to utilize the Facebook group as a larger-scale organizing platform, as well as in supporting students in developing relations with students from various schools and sites. While this study focused on the natural evolution of communication over time between three distinct classrooms, future studies with a more intentional and directive focus on students fostering relations within the online platform could yield a more stable network. Furthermore, extending the research project (i.e. 1 full school year) may have also allowed communication ties to stabilize. This could offer the researcher room to test larger time windows (i.e. two or three months), potentially creating a more stable network to model longitudinally.

The present study consisted of one class per school within a one-semester time frame. Classrooms were diverse in demographic makeup. Thus, students' same school attendance may have been a more significant predictor of communication ties then similarities in demographics. A larger study, consisting of several classes within the same school, as well as classes among different schools would allow further examination of communication patterns. For example, a larger study of this type could examine whether similarities in demographics (i.e. race, gender, age, etc.) predict communication on the Facebook group between students within the same school.

Lastly, civic participation in this study measured the activities of young people in their schools and communities. However, this measure did not capture online political activity, a vastly expanding area in which young people are becoming civically engaged, as well as politically informed (Raynes-Goldie & Walker, 2008). Thus, developing or utilizing new measures which tap into constructs of online civic engagement (i.e. online

petitions, political blogging, etc.) may further illustrates patterns in online communication. In other words, students may tend to communicate with those whom rate similar to them with regards to online civic participation. This trend could highlight potential divides or cliques within online networks with regards to online civic activity that were not captured using current measures. Using a measure as a proxy for online civic participation could further add to our understanding of adolescent online communication networks, and if YPAR can be a point of intervention in increasing cross-group communication over time.

Implications for Future Interventions

In addition to providing implications regarding future research, the current study offers new implications for intervention efforts aimed at scaling up YPAR projects through the utilization of online platforms. In contrast to the large number of YPAR projects implemented within schools, to date, there is one other intervention, which aimed to facilitate communication online between distinct YPAR groups (Lichty, Mortensen, Foster-Fishman, & Kornbluh, *in preparation*). Lichty and colleagues developed an online platform for rural youth in West Virginia to engage in photovoice (i.e. word press). Specifically, youth discussed issues impacting other youth in their counties. However, this intervention did not utilize social networks to examine cross-communication between county youth groups. While prior research on YPAR has focused largely on the process of an individual YPAR project, this study is one of the first to employ SNA in examining the process of scaling up YPAR efforts across distinct groups. Additionally, the study highlights important considerations and implications for future intervention efforts, and attempts to increase diverse communication across

adolescent groups. One consideration for future interventions is that it might take several months of participation on an online forum for diverse communications to develop. Thus, the intervention ought to be planned within a larger and more ample time frame. It may also be important to realize that the social action stage of the YPAR project may be particularly important for facilitating diverse communication. Thus, interventions short on time may want to focus on connecting groups online during the action stage of the YPAR project in order to increase awareness and coordination across distinct groups.

Furthermore qualitative findings highlight factors that can enhance communication both between, and within YPAR groups. For instance, interventionists may consider activities both online (i.e. getting to know you introductory questions) and in-person (i.e. icebreakers) to increase comfort, and familiarity between youth. In particular, these activities might ease potential tensions and discomfort interviewees indicated having when communicating with students from different schools. In addition, interventionists can provide training in online communication, specifically, using descriptive and clear language, as well as supplementing text at times with visuals (i.e. social media) to increase understanding between students from different schools and backgrounds. Furthermore, interventionists can provide training in appearing friendly, accepting, and inviting online, for example, openly soliciting and welcoming feedback from other groups.

Conclusion

As a result of scarcity in efforts attempting to scale-up YPAR projects, it is critical to learn more about communication between YPAR groups within an online platform. Although, former research has focused on the process and influence of the

individual group, the current study concentrated on the communication between groups. As the Youth Research Hub progressed, and students entered into the social action component stage of the YPAR project, findings indicated an increase in cross-communication between schools and levels of civic participation. These findings imply that particular components of YPAR may offer the opportunity for diverse relationship development, encouraging students to branch out of their current online communication *silos*. Findings offer promising results in that online platforms may provide a unique intervention to connect diverse groups (in civic activity and geographic location) as well as offer the potential for large-scale coordination efforts.

Chapter Six: Study Two Methods, Results, and Discussion

This chapter will focus on study two -- examining how students' position in the network and with who they are connected influences their frequency in utilization of overall YPAR practices. The chapter will consist of the following four components: (1) a discussion of data collection measures, (2) the data analysis plan (3) network and qualitative results, and (4) implications for future research and intervention design.

Data Collection Measures & Variables

Data collection measures consisted of an in-person survey (described in detail chapter 5) that included demographic questions (i.e. gender, & grade), online survey, network snapshots (described in detail in chapter 4), and key informant interviews (described in detail in chapter 4). The online survey was administered in March and May of 2014. The survey gathered data on students' frequency in use regarding an overall set of YPAR practices. This survey solicited information regarding students' general engagement in YPAR practices (i.e. critical inquiry, data collection, and data driven solutions). Categories were identified from YPAR manuscripts that focused on methodological approaches and key engagement strategies (Cammarota & Fine, 2008; Fine & Tore, 2004; Flores, 2007; Kindon, Pain, & Kesby, 2007; Langhout & Thomas, 2010; London & Zimmerman, & Erbstein, 2003), as well as publications documenting YPAR projects executed in collaboration with the specific partnering organization (Ozer, Cantor, Cruz, Fox, Hubbard, Moret, 2008; Ozer & Doguals, 2012/2013; Ozer & Wright, 2012). Two additional manuscripts were used to identify key YPAR activities. The first identifies prominent research activities executed within school-based YPAR projects (Kornbluh, Ozer, Kirshner, & Allen, *under review*). The second focuses on research

methods in data collection, analysis, and action utilized by YPAR projects within the last five years (Kornbluh & Richards-Schuster, *in preparation*). While reviewing the literature, I tracked frequency in activities, as well the occurrence of such activities during specific stages of the YPAR project. Initial items were identified based on their prominence of use within the context of the school environment. The organization and site coordinators reviewed the final survey in order to ensure external validity (For further details see appendix J for Online Student Survey).

Independent Variable – Gender

Gender was operationalized for study two in the same way as it was for study one (see Chapter 5 for further details).

Independent Variable – Grade

Students also answered demographic questions regarding their grade. Site coordinators filled out a brief one-page survey concerning the grade of each student absent during data collection (see Chapter 5 for further details on the administration of the paper survey).

Independent Variable- Degree Centrality

Degree centrality refers to the number of relations that an actor has in a network (Freeman, 1979). In the context of this study, degree centrality was normed and measures the proportion of students with whom a student communicates on the Facebook group out of all possible relations. Using the March network, degree centrality was calculated for each actor using UCINET (Borgatti, Everett, & Freeman, 202: see analysis section below for further details). The data was first symmetrized in UCINET. This a tool used to turn "directed" network data, into "un-directed" (i.e. symmetric data) (Hanneman & Riddle,

2005; Borgatti et al., 2002). This study utilized a maximum symmetric approach to transform the network data. In a maximum approach each cell in the upper-diagonal part of the matrix is compared to the lower diagonal part of the matrix. The maximum approach enters the larger of the values found in both cells. Thus, a maximum approach counts a tie as present between two actors (*i* and *j*). For instance, if actor *i* commented on/tagged/or liked actor *j*'s posts, or if actor *j* commented on/tagged or liked actor *i*'s post.

Independent Variable – Civic Participation.

Civic participation was operationalized for study two in the same way as it was for study one (see Chapter 5 for further details).

Independent Variable - Average use of YPAR Practices among Alters

Average use of YPAR practices among communication partners was developed to test the influence of alter behavior on student actions -- specifically, whether a student's alters (i.e. whom students communicate with) frequency in use of overall YPAR practices influence that student's own use of YPAR practices. This variable was created by averaging the use of YPAR practices among communication partners in March.

Dependent Variable – Frequency in Utilization of YPAR Practices

Each YPAR practice survey item in the study's final month (i.e., May) was summed together to create a composite score capturing a student's total frequency in use of YPAR practices. This particular study was interested in examining how a student's position within the network and their communication partners influenced their frequency in use of YPAR practices overall. In other words, if a student communicates with another peer on the Facebook group and sees their peer using a YPAR strategy, will they

be more likely to use any YPAR practices? Thus, YPAR practices were operationalized as *a set*, and specific YPAR practices were not examined separately. Qualitative findings further support this operationalization, in that students tended not to identify and implement specific YPAR strategies discussed on the Facebook group, but viewed the Facebook group as motivator to continue engagement in the YPAR process (see results section below).

An examination of the distribution of the "May Frequency in YPAR Practices" variable revealed that it was non-normally distributed, with an amount of sample skewness of 1.96 (*SE* = .36), exceeding the critical test statistic (Z = 5.44)[6] (Bulmer, 2012; Cramer 1997). Therefore, the log transformation was calculated by taking the natural log in SPSS. This type of log transformation is a standard method used for normalizing data (Keith, 2006). Once the log transformation was performed the data was no longer positively skewed, with a sample skewness of -.05 (*SE* = .36), within the critical test statistic of (Z = -.14). The regression analysis below used the logged version of the "May Frequency in YPAR Practices" variable.

Exit Student Interviews

Exit interviews consisted of open-ended exploratory questions focused on students' use of YPAR practices. Specific questions focused on whether particular students tended to be key sources of information within the group. Questions included: *"Did it matter who posted YPAR ideas or activities? If so, whose particular posts did you pay attention to? What about this person caught your attention?"*

Data Analysis

[6] A Z statistic above 2, or below -2 indicates exceeds the critical test and indicates skeweness.

Social Network Analysis

Study two examines how student demographics (i.e. gender, grade), behavior (i.e. level of civic participation), position in the network, and with whom they are connected to influence their utilization of YPAR practices (see Hypothesis 5, Table 5 below for further details). I employed a multiple regression analysis to test the effects of demographic controls (i.e. gender & grade), degree centrality, civic participation, and the average use of YPAR practices among communication partners in March on a student's frequency in utilization of YPAR practices in May. I used a random permutation test (simulating the test 10,000 times) to examine significance. This method of testing significance addresses the issue of the small sample size (N=44) because random permutation tests are non-parametric and derive the sampling distribution from permutation of the existing data (Good, 2001).

Multiple Regression Equation:

$$Y_{\text{Logged Frequency in use of YPAR Practices}} = \beta_0 + \beta_1 X_{\text{Gender}} + \beta_2 X_{\text{Grade}} + \beta_3 X_{\text{Degree Centrality}} + \beta_4 X_{\text{Civic Participation}} + \beta_5 X_{\text{Summed Present Relations}} + \beta_6 X_{\text{Averaged Alter's Frequency in Use of YPAR Practices}} + \varepsilon$$

Only 43 students filled out both online surveys (80% participation rate). Thus, the data associated with 10 students was dropped from the multiple regression analysis. Students with missing data were disproportionally male ($T(1,53) = 2.34$, $p < .05$), and freshmen and sophomores ($T(1,53) = 4.33$, $p < .01$). No differences were identified regarding race ($T(1,53) = .01$, $p = .92$), or school ($T(1,53) = -1.2$, $p = .23$). (See Table 8 for further details).

Table 8. Study Two, Hypotheses & Analysis Plan

Research Question	Analysis
How do student demographics, behaviors, and positions within the network influence their adoption of YPAR practices? **Hypothesis 5.** Girls will be more likely to frequently utilize YPAR practices overall when compared to boys. **Hypothesis 6.** Students rating highly in civic participation will be more likely to frequently utilize YPAR practices overall when compared to students with low civic participation. **Hypothesis 7.** Students with high degree centrality will be more likely to frequently utilize YPAR practices overall compared to students with low degree centrality. **Hypothesis 8.** Students are more likely to frequently utilize YPAR practices overall if they communicated with others who frequently utilized YPAR practices **(Hypothesis 8).**	**Multiple Regression:** Tests whether student demographics (gender, grade), level of civic participation, positions within the network (degree centrality), as well as students' alters' average frequency in YPAR practices during Time 1 (March) predicts student use of YPAR practices during Time 2 (May).

Qualitative Analysis

Qualitative analytic procedures are the same identified and detailed in study one (see Chapter 5). Saturation of themes was identified after the second interview.

Combining Qualitative & Quantitative Results

Procedures for combining qualitative and quantitative data mirrored that in study one (see Chapter 5 for details). To test each hypothesis for study two, themes will be coded as a facilitator either promoting or a barrier thus hindering the likelihood of

frequently utilizing YPAR practices discussed on the Facebook group. Figures were developed indicating the percentage of themes mentioned across interviews.

Table 9. Total Sample vs. Missing Sample

Demographics	Total Sample	Missing
Gender		
Male	20	9
Female	24	1
Race/Ethnicity		
American Indian/Alaska Native	1	2
Asian	17	4
Black/ African-American	3	3
Hispanic or Latino (a)	16	0
Native Hawaiian/ Other Pacific Islander	1	0
White	4	0
Other	2	1
School		
School A	18	2
School B	11	4
School C	15	4
Grade		
Freshmen	1	3
Sophomore	2	4
Junior	24	2
Senior	17	1

Results

Social Network Results

Results from the multiple regression indicated that gender, grade, and degree centrality in March were not significant predictors of students' frequency in use of YPAR practices in May. Yet, civic participation was a significant positive predictor of frequency in use of YPAR practices for May ($B = .89$, $p < .05$). In other words, for every one unit of change in a student's civic participation, there was an 89% increase in their utilization in

May YPAR practices. Furthermore, results indicated that the proportion of partners a student had within the Facebook group (i.e. degree centrality) was not a significant predictor of that student's utilization of YPAR practices. Thus, the number of communication partners students had over time was not strongly associated with their frequency in use of YPAR practices. However, their alters' average frequency in use of YPAR practices was a significant positive predictor of students' own utilization of YPAR practices (B = .02, p < .05). In other words, for every one unit of change in alters' average frequency of use of YPAR practices, there was a 2% increase in students' own utilization of YPAR practices. For further details see Table 9 (below).

Table 10. Predictors of Frequency in use of YPAR Practices

	May YPAR Practices T Obs.
Constant	1.95
Gender	.39
Grade	-.19
Civic Participation	.89*
March Degree Centrality	-1.45
Averaged Alters Frequency in Use of YPAR	.02*
R^2	.40***

Note. N = 44, p < .05*, p < .01**, p < .00***

Qualitative Results

Qualitative interviews indicated that students struggled in employing or utilizing YPAR activities they read about on the Facebook group. Notably, interviewees identified two distinct barriers in dissemination. First, they had limited structural support to discuss and implement the content they were being exposed to on the Facebook group. Limited structural support from teachers restricted students' ability to identify ways to incorporate content from the Facebook group (i.e. YPAR activities of other schools) into their action research projects. Second, students also noted that their projects tended to diverge in social issues, and thus felt that their research projects ought to have a distinct trajectory, which differed from other schools. This lack of structural support and divergence in social issues created barriers in both the dissemination and utilization of YPAR practices through the Facebook group. However, there were two instances (discussed in further detail below) in which students identified being exposed to unique ideas on the Facebook group. Furthermore, students noted that the different YPAR activities posted on the online platform served as motivation for students to continue forward with their own research projects. (For visual illustration of qualitative results regarding dissemination of YPAR activities see Table 10.)

Finding One: Limited Class Discussion

All 12 interviewees noted a lack of class discussion regarding the different projects and research activities they were exposed to on the Facebook group. Four out of four students from each school (100%) identified limited class discussion as a barrier hindering their utilization of YPAR activities they had read about or been exposed to on the Facebook group (For visual illustration see Figure 7). This was a consistent barrier

across gender, level of civic participation, and degree centrality (For visual illustration see Figure 8, 9, & 10).

Table 11. Dissemination Themes

	Total N=12	School			Gender		Civic Participation		Degree Centrality	
		A N=4	B N=4	C N=4	Male N=7	Female N=5	High N=6	Low N=6	High N=6	Low N=6
Barriers to Dissemination										
Lack of Structural Supports	100%	4	4	4	7	5	6	6	6	6
Divergent Topics	50%	1	1	2	3	2	3	2	3	2
Instances of Dissemination										
Receiving Ideas on the Facebook Group	25%	0	2	1	1	2	2	1	3	0

Students reported that the Facebook group provided an opportunity to read and reflect upon their own progress. *"It was more of an individual process, like we didn't discuss the Facebook group in class. I mean if we did it was like really limited"* (Student Interview, School A, High Civic Participation, & Low Degree Centrality). This was described as an independent process in which each student reviewed the posts of other students and commented where they saw fit. Students articulated a disconnect between planning their own YPAR projects, and their activities on the online platform. In other words, students viewed their own YPAR project planning as separate from their engagement with the online platform itself. This is likely because students did not have structured class discussion in regards to how YPAR activities posted on the Facebook group could be

utilized in their own project, *"It was cool to learn about other projects, but sometimes we really couldn't because we had to discuss what to do with our own projects"* (Student Interview, School C, High Civic Participation, & High Degree Centrality).

Although teachers were provided with in-person training and example lesson plans regarding ways to incorporate the Facebook group into students' YPAR projects, teachers tended to be wary of using the Facebook group when there was not onsite technical support. Student noticed, and articulated this pattern. *"I mean when you [indicating Interviewer] were here, we read and discussed the Facebook group in class, and I did learn new things. But we didn't do that so much when you weren't here. We just focused on our projects, I mean I did my weekly posts, but that was it"* (Student Interview, School C, Low Civic Participation, & Low Degree Centrality). Due to the lack of discussion regarding the content students were reading on the Facebook group there was limited opportunity for students to integrate ideas into their action research projects. Furthermore, since teachers struggled to connect the class YPAR project to the Facebook group, students weren't given the message that the Facebook group could be utilized to inform or support their own YPAR project. Rather, they saw their time on the Facebook group and planning their YPAR project as two separate responsibilities.

Finding Two: Different Topics

Six interviewees identified having different social issues as a barrier in relating their research projects to YPAR activities posted by other schools on the Facebook group. Furthermore, students articulated struggling to see how what other groups posted could transfer to their research projects. *"It was interesting. But I just don't think anything they posted applied to our project. I think it just applied to theirs. Again, it was interesting,*

but we couldn't really use it" (Student Interview, School A, High Civic Participation, & Low Degree Centrality). Notably, students indicated that if each school had the same topic, this might have spurred greater diffusion of ideas within the Facebook group. *"We were tackling depression, I think it would have been cool if other schools' were also trying to tackle that issue, and we could see what they were actually doing"* (Student Interview, School C, Low Civic Participation, & Low Degree Centrality). Students also hypothesized that having the same topic may have spurred more joint organizing and collaboration between the different schools. *"Then it would have been more for organizing, sharing ideas, and opinions for a similar cause"* (Student Interview, School C, Low Civic Participation, & Low Degree Centrality).

Two out of the four interviewees from School C (50%), whose research project was focused on depression, articulated having a difficult time relating their social issue with the social issues addressed by the other two schools. Thus, these interviewees indicated having different topics as a barrier hindering their frequency in use of YPAR practices they were exposed to on the Facebook group (See Figure 7 for visual illustration). Both schools A and B had a narrower focus on improving the delivery of a specific service with their school while School C's action plans were focused on influencing the larger school climate. Thus, the eventual divergence in tactics may have made it even more difficult for students from School C to relate to the projects of other schools. This challenge may have been even more prominent during the social action phase. Alternatively, students from School A and B may have had an easier time connecting to the social issue of depression as a phenomenon they had been exposed to in some personal manner (e.g. themselves, peers, & family). It is possible that the

divergence in social issues and action plan made it difficult for students to connect YPAR activities employed by students from different schools to their own research projects.

Finding Three: Receiving Ideas from the Facebook Group

Three of the interviewees noted that observing other students' activities on the Facebook group inspired them to take action in their own YPAR projects. One specific instance of this occurrence was when students from School A asked students from Schools B and C to take their survey regarding school counselor availability at their respective schools. While students had actually taken several surveys from both the organization and myself, the act of taking a student-developed survey was unique, and inspired them to begin to think of ways they could design and conduct their own surveys. *"I know some of them were making surveys. I wanted to start a project, where we did that too. I would like to do a survey, to see what other kids think. Then we can measure changes before and after"* (Student Interview, School C, High Civic Participation, & High Degree Centrality). While neither the groups from School B or C conducted their own surveys during the project, interviewees from both groups discussed the possibility of implementing a survey the following year to assess the impact of their projects, as well as to identify new areas of need within their schools. Interviewees noted the important role survey results could have in helping them to leverage change in their schools. "*The results of a survey people would take them seriously"* (Student Interview, School B, High Civic Participation, & High Degree Centrality).

Furthermore, there was an incident in which students from School B received an idea from a student from School C, and utilized that idea as their social action strategy. In this incident, students were brainstorming next steps for addressing the root cause of their

social issue on the Facebook group. Several students noted that the underlying source of their problems was a lack of school resources. During this exchange, one student from School C suggested that students from her school could hold a fundraiser in order to increase resources at their school.

> *I got the idea from other students on the Facebook group. They said 'do a fundraiser, to get, like, more resources'. I was calling my, like, classmate over, and I was like, 'look at this, this is a really good idea'. I was copying, and pasting it. And she was like, 'oh we should do this'. I said, 'okay, let's do it' and everybody in the class said 'okay', and everybody like, agreed. We raised money, so we could donate money to our health teacher, so the freshman or sophomore class could have a better environment to learn health* (Student Interview, School C, Low Civic Participation, & Low Degree Centrality).

In this unique interaction, communication and discussion across different schools was transferred into a timely action strategy for one group. Notably, during this instance, both School B and School C converged in identifying a lack of school resources as a root cause that was impacting both their social issues. During this moment of overlap, students from School B were able to employ an idea, which School C had originally brainstormed as their own potential action strategy.

Additionally, students described feeling inspired and motivated to continue forward with their own action research projects as a result of observing the general YPAR activities of other schools. Students articulated that watching other projects move forward reminded and challenged them to push forward with their own work. *"When I started to see some of the things they were doing. Some of them were making surveys. It*

kind of motivated me to want to also start a project" (Student Interview, School C, High Civic Participation, & High Degree Centrality). Observing other students' projects inspired these students to work towards addressing issues within their own school. "*I felt like, 'okay' well if other kids are ready, then we should start getting ready, to start our own project, to give us a sense, that we are doing something better for our school to"* (Student Interview, School C, High Civic Participation, & High Degree Centrality). Yet, students also expressed a desire to maintain their own direction within their research projects. For instance, students reported being interested in other projects (stages of data collection, action strategies, etc.) but also wanted to ensure that the trajectory of their own project was unique. *"We wanted to make ours also kind of unique in a way. So it won't be like, it was just like we were copying from their hard work that they put into it. So I think it was more like looking at theirs was mostly like motivation to start working on ours"* (Student Interview, School C, High Civic Participation, & High Degree Centrality). Thus, although observing other students' execution of YPAR practices may not have supported dissemination in student replication and testing of specific YPAR strategies, this interaction did enhance and motivate students to continue forward with their own YPAR projects.

Discussion

In support of prior literature, results indicated that the YPAR activity of students' communication partners was *modestly* positively associated with their own use of YPAR practices. Therefore, findings supported **Hypothesis 8.** Results indicated that it was not the proportion of ties students had with other students in the network (i.e. degree centrality), but who students were connected to that predicted their use of YPAR

practices. These findings have critical implications for future research, and interventions efforts' regarding examining as well as supporting the dissemination of YPAR practices through the development of online platforms. In contrast to prior research, results indicated that students' degree centrality was not significant predictors of their frequency in use of YPAR practices (Coleman et al., 1966) Kempe et al., 2003; Krackhardt, 1990). Thus, the results of this study did not support **Hypothesis 7**. This divergence in findings may illuminate the differences in the quality and types of relationships examined here and in other studies. For instance, communicating on the Facebook group may not bring the same sense of personal security or the social clout to try a new innovation when compared to having close ties within the work place (e.g. Krackhardt, 1990).

Figure 7. Factors Supporting and Hindering Dissemination by School

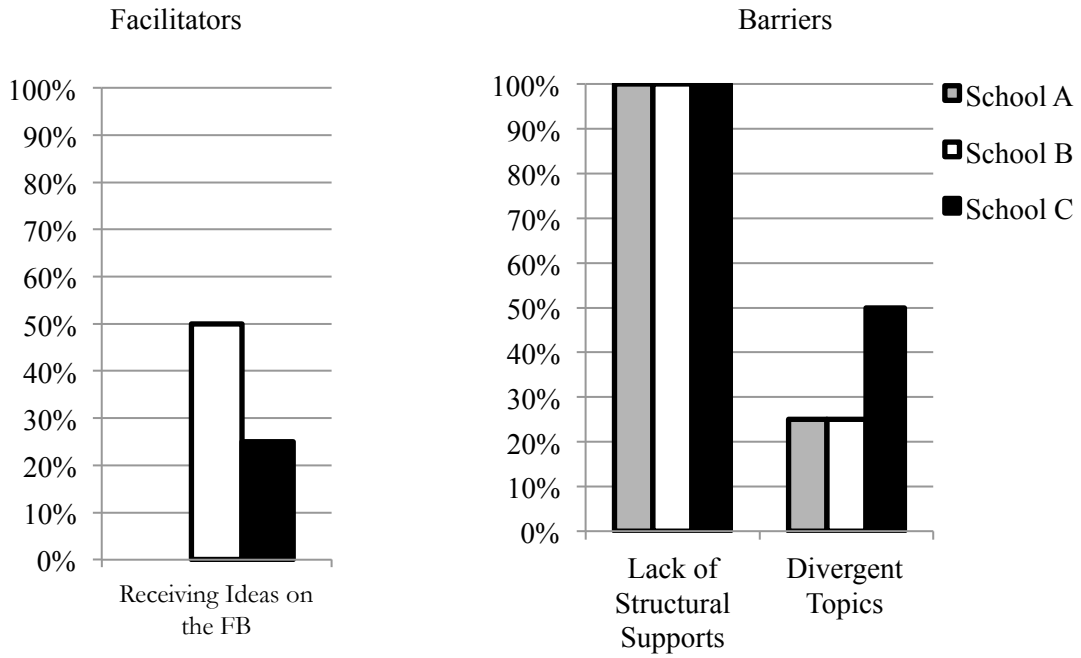


Figure 8. Factors Supporting and Hindering Dissemination by Gender

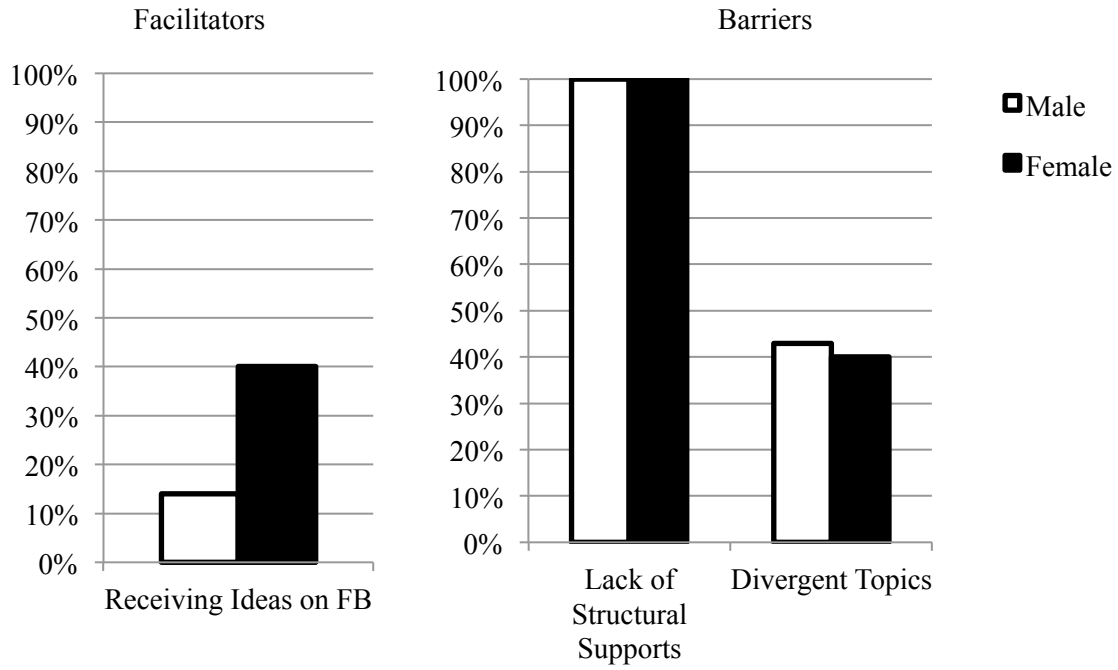


Figure 9. Factors Supporting and Hindering Dissemination by Civic Participation

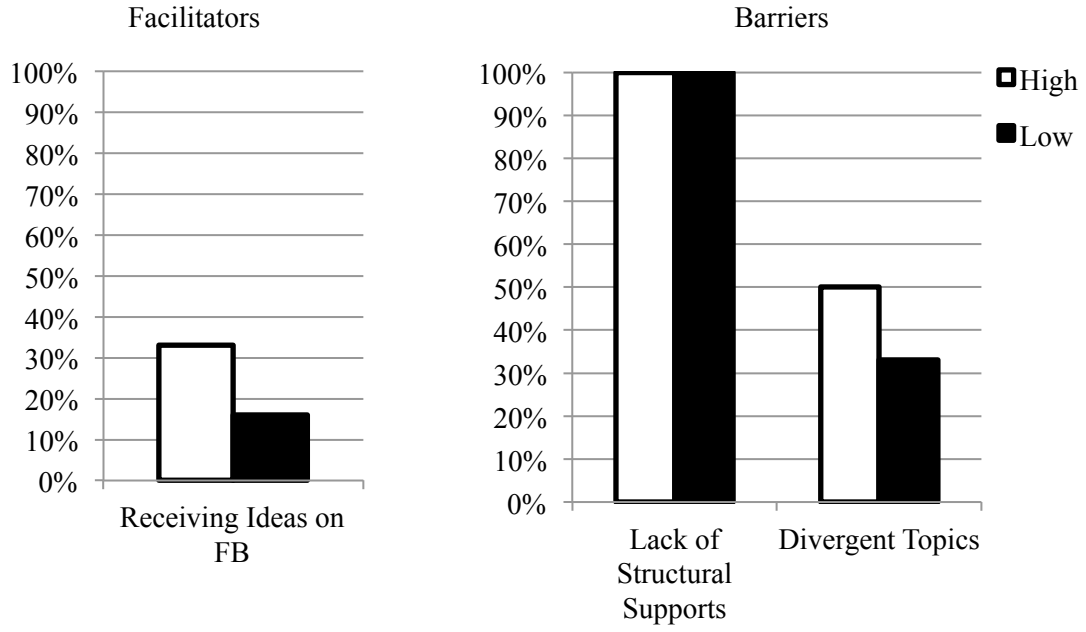
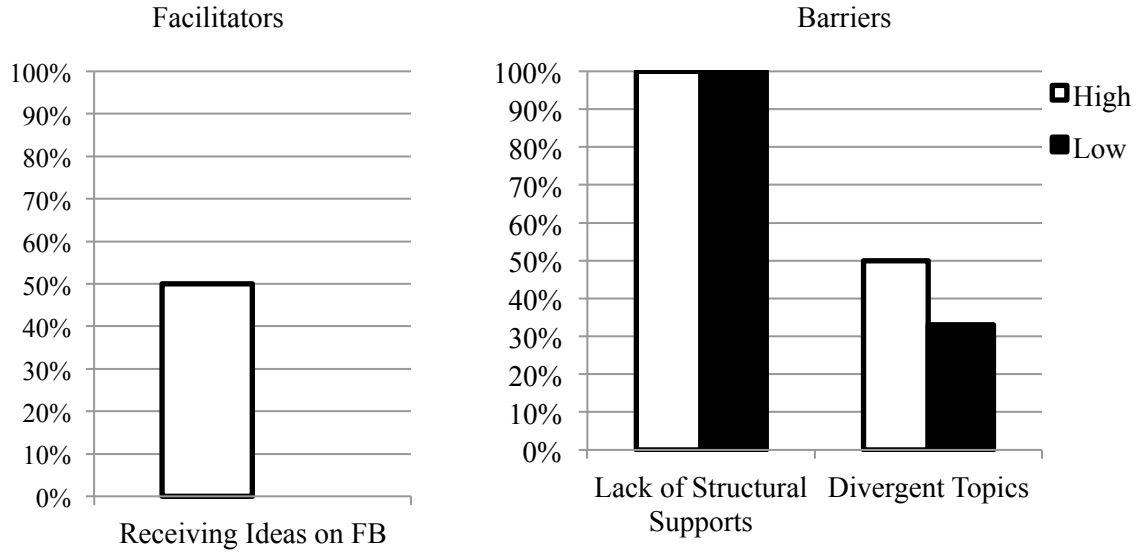


Figure 10. Factors Supporting and Hindering Dissemination by Degree Centrality



Qualitative findings shed some light on these unique results regarding degree centrality. For instance, students indicated a disconnect in reading the ideas posted from other YPAR classes on the Facebook group, and transferring those ideas to their own projects. Qualitative interviews indicated that this might have been a result of the divergence in YPAR topic areas between schools. This appeared to make it difficult for some students to connect the ideas they read on the Facebook group to their own topics. Additionally, teachers did not provide structural support (i.e. time in class) to discuss ideas on the Facebook group, and how these ideas might relate with or transfer to their own class project. These findings are in line with prior research, which has found that divergence in focus and lack of structural support can be barriers to both dissemination and implementation efforts (Rogers, 1962).

In regards to demographics, gender and grade were not significant predictors in students' frequency in use of YPAR practices. Thus, findings did not support **Hypothesis 5.** While research has noted that girls are more likely to complete their course work

(Jackson, 2002 & 2003; Oyserman et al., 1995; Xu, 2006), YPAR differs from traditional homework in that youth are key decision makers within the research process, working towards addressing social issues within their school environment. Thus, gender was not a significant predictor in students' overall utilization of YPAR practices. In the context of grade, YPAR is a flexible and adaptive approach, and thus has been utilized across a diverse range of ages (e.g. ranging from elementary school to college students) (Goodhart et al., 2006; Kohfeldt et al., 2011). Therefore age was also not a significant predictor in students' overall utilization of YPAR practices.

Notably, students' level of civic participation was a significant predictor in their overall use of YPAR practices (supporting **Hypothesis 6**). Thus, results indicated it was not how *central* students were located within the online network, but rather their own level of civic participation that predicted their frequency in utilization of YPAR practices. Study results do support the findings within sociopolitical development literature (Watts, Griffith, & Abdul-Adil, 1999), which suggests a strong relation between young people's civic participation, and their engagement in YPAR. A critical component of YPAR is that it involves young people being aware of the sociopolitical context of their environment in order for them to identify the root cause of a problem, and translate those findings into social action strategies (Kornbluh et al., *under review*). Youth who are more civically engaged may have an easier time utilizing YPAR practices than youth who are not civically engaged, as they have additional experience discussing and tackling social and political issues within their communities. As a result, youth whom are not civically engaged may be less likely to adopt or utilize YPAR practices. These findings highlight the importance of intervention efforts targeting additional supports to these youth (e.g.,

one on one support from teachers, paired mentoring with civically engaged students, etc.) to enhance dissemination efforts, as well as to ensure disparities in civic participation do not worsen.

Furthermore, degree centrality was not a significant predictor of their frequency in use of YPAR practices. In regards to dissemination of YPAR practices, results of the present study provide evidence that students tended to be more likely to adopt or utilize YPAR practices if their alters (communication partners) indicated utilizing YPAR practices. Thus, findings indicate that it was not the quantity of alters (i.e. communication partners) a student had, but those alters' frequency in use of YPAR activities that mattered in regards to students' own frequency in use of YPAR practices. Results support a cohesion framework, which stresses that individuals who have connections to those who adopt an innovation are more likely to embrace the innovation themselves (Coleman et al., 1966). Qualitative interviews also supported this finding, noting that students identified key instances and conversations with specific peers that enhance their own use or receptiveness to utilizing YPAR practices overall. This finding is consistent with prior network research, which highlights the critical role of alters' behaviors in influencing the adoption and utilization of new innovations (Carroll et al., 2001; Frank et al., 2004). Rogers (1962) notes that not all individuals have an equal amount of influence, or are influential in spreading information about an innovation. Yet, students' alters who demonstrate frequent and early adoption in YPAR practices may hold more influential roles within the Facebook group, as they are active in moving their YPAR projects forward, and thus may be seen as leaders with greater influence compared to others.

Implications for Future Research

Future research should continue to track the dissemination of YPAR practices within online platforms. Studies in this vein will further help in identifying key characteristics, and network positions that predict the adoption and utilization of YPAR practices. In particular, continued research would be useful in the following three areas: (1) longitudinal social network modeling, (2) tracking different dissemination strategies, and (3) considerations regarding additional network measures.

The analysis in the current study does not account for the influence that endogenous network effects can have on the dissemination of YPAR practices across time points. For instance, one might consider whether the network effect of reciprocity (i.e., if one actor has a communication tie directed to another actor, that actor is more likely to communicate back) influences the frequency in utilization of YPAR practices. Furthermore, the current analysis cannot disentangle the effects of selection and influence. For instance, do students tend to associate with students who utilize the same frequency of YPAR practices (i.e. selection effects), or are students' use of YPAR practices impacted by whom they are connected to over time (i.e. influence effects)? As noted in study one, longitudinal network analysis operates under the assumption that a proportion of relations in the social network remain over time. In this particular sample, communication patterns varied notably. Future research that achieves above 30% consistency of network relations within a network could use longitudinal network analysis to further explore causal influences in dissemination.

The present study examined the dissemination of key YPAR activities between three classrooms. Notably, in this study YPAR activities could have been identified through the online platform, as well as with the support of peers/classmates, or the

instructor (i.e. multiple sources of information). Future studies could implement specific YPAR activities within a single classroom (e.g. photovoice), and track if these ideas or activities transfer to other classrooms through the online platform. Furthermore, the literature has emphasized the pivotal role key stakeholders can play in the dissemination of key ideas and/or practices (Kelly & Kalichman, 1995; Neal, Neal, Atkins, & Henry, 2011; Rogers, 1962). Future research could engage influential students (based on peer nominations) to assist in dissemination efforts. For example, one could allow students to advocate for a key practice within the online platform and analyze how this influences the behavior of other students (i.e. frequency in use of YPAR practices).

Lastly, the present study examined the role of degree centrality, and cohesion (i.e. alters' YPAR practices) in the adoption, and utilization of YPAR practices. Yet, prior literature has identified the potential role structural similarities between actors within a network (i.e. having relational ties to the same alters) have on the adoption of key practices. For instance, Neal and colleagues (2011) found that evidence-based teaching practices were more likely to spread among teachers who had relational ties to the same alters (i.e., via structural similarity), rather than among teachers who directly communicated (i.e., via cohesion). Thus, future studies could benefit from examining the role of structural similarity between actors, and their adoption of YPAR practices.

Implications for Future Interventions

In addition to guiding future research, the current study offers new implications for intervention efforts aimed at supporting dissemination of YPAR practices through the utilization of online platforms. With two exceptions, network analysis has primarily focused on the spread of risk-taking behaviors (i.e. un-protected sex, drug use, smoking,

etc.) (Bearman et al., 2004; Christakis & Fowler, 2008; Mednick et al., 2010). First, Langhout, Collins, and Ellison (2014) examined the relations between youth involved in a YPAR project, and their ties with family and members of the school. Additionally, Long, Harré, and Atkinson (2014) examined the influence of students' peers on their recycling, and littering behaviors. To date, this study is the first to address gaps in both the literature on YPAR and diffusion science examining the spread of innovations generated, exchanged, and adopted by youth, specifically, that students' alters' utilization of YPAR practices was significantly, and positively associated with their own use of YPAR practices. This study highlights that it is not the quantity of the interactions (i.e. bolstering diverse online communication) but rather the quality of interactions that can support dissemination efforts. Thus, dissemination efforts that intentionally enhance quality and depth in communication can further facilitate the spread and adoption of YPAR practices.

Qualitative findings highlighted strategies for improving the online platform as a tool for dissemination. For instance, interventionists ought to consider structural supports to enhance students' transfer of online activity to classroom discussion. In the current study, teachers were trained in using the Facebook group, provided example lesson plans, as well as in-person training. Yet, teachers still struggled with implementing the Facebook group discussion into their classroom. Teachers face various challenges implementing YPAR, and the additional online activity may have be overwhelming for teachers new to YPAR (Kirshner, *in press*; Kornbluh et al., *under review*). Having onsite weekly technical support (i.e. lessons using the Facebook group and social media) could further incorporate online Facebook activities into the classroom as well as ease teacher

comfort with, and use of the platform. Furthermore, qualitative findings highlighted that the divergence in YPAR topics may have created a barrier in students being able to apply YPAR activities discussed on the Facebook platform to their own projects. Intentionally designing a platform in which all YPAR groups work together to identify a similar topic prevalent across all sites may facilitate greater dissemination of YPAR activities. In such scenarios, students can easily identify how ideas from one group can translate to their own YPAR project. Although identifying one primary topic may limit the autonomy of individual YPAR groups (a notable key benefit of YPAR projects), it may also provide opportunity for youth to develop skills in large scale organizing (i.e. requiring localized adjustments, accommodation, and strategic planning) to influence and change higher order structural policies.

Conclusion

Due to the limited efforts to attempt to scale-up YPAR projects, it is critical to track the dissemination of YPAR practices within an online platform. This study, which concentrated on the dissemination of YPAR practices, yielded findings that were consistent with the youth organizing literature, and cohesion theory. Results indicated that online platforms, which support the dissemination of YPAR practices, might be better suited for students whom are already civically engaged in their schools and communities. Students with limited experience in civic engagement may take longer to adopt or utilize YPAR practices and may require additional structural supports. Furthermore, students' degree centrality did not predict their frequency in use of YPAR practices. Rather, students whose alters frequently utilized YPAR practices overall in March were more likely to frequently employ YPAR practices in May. This finding

suggests that connecting students to early adopters as well as key opinion leaders within the online platform may increase the speed at which YPAR is disseminated and utilized, as well as address potential disparities in engagement. Future research and intervention efforts will benefit from supporting and tracking dissemination of YPAR practices within online platforms.

Chapter Seven: Final Thoughts

The concluding chapter of this dissertation consists of two components. First, this chapter will discuss limitations in design and measurement regarding study one and two. Second, it will highlight the connections between the two studies, and explore overarching implications for future research and intervention design efforts.

Limitations

A number of limitations must be considered when interpreting the findings of the two studies, including: 1) limitations in data analysis, 2) alternative explanatory variables, and 3) the sample size as well as participant demographics.

For instance, although the research design was longitudinal, many of the analyses employed in the present study were cross-sectional. While triangulation in data collection methods improved the validity of the findings (i.e. E-I indices, QAP multiple regression results, and qualitative interviews), longitudinal analysis is needed to examine causal changes in the communication networks over time. Specifically, two different processes might occur that explain why youth whom exhibit the same level of civic participation tend to communicate with one another. First, selection processes concern the mechanisms by which individuals choose the peers with whom they form relationships (Veenstra et al., 2013). In contrast, influence processes refer to individuals altering their behaviors or attitudes in response to their peers' behaviors or attitudes. Both processes result in the same phenomenon: that the individuals who are connected to one another are similar. Yet this similarity may be due to similar individuals choosing to associate with one another (selection), or connected individuals becoming increasingly similar

(influence). Longitudinal analysis employing stochastic actor-based modeling can tease apart these two different processes.

Other limitations of the study include both the design, and the potential for alternative explanatory variables. Key YPAR practices operationalized in the survey were identified as coming from a variety of sources (i.e., teacher, peers, and the Facebook group). As a result, communication within the online platform was not the sole channel for dissemination of YPAR practices. Thus, alternative processes may have occurred. For instance, students may have become more aware of YPAR practices based upon their classroom peers, and these peers' overall use of YPAR practices.

Both studies were exploratory examining new phenomenon (presenting online communication, as well as the dissemination of YPAR practices) between three distinct YPAR groups in urban racially diverse high schools. Yet, the external validity of the results is limited as both studies were conducted with only three classrooms. Thus, findings that do not support past research (e.g. increased communication between schools and between students of different levels of civic participation during the action stage of YPAR) may be a result of the unique environments within the three classrooms used in this study. Furthermore, ten participants did not complete the online survey (see Chapter 6 Study Two for further details). These participants were disproportionally male, and freshmen and sophomores. Thus results may have varied if their data were incorporated into the study.

Conclusion

This study takes steps to answer a recent call to the field of community psychology by Ozer, Petrokubi, and Zeldin (2013) at the Society of Community Research and Action Biennial Conference of 2013 regarding the need to scale-up YPAR practices, "*in terms of expanding*

isolated exemplars to wide spread, and sustainable practices". In collaboration with a community-based organization, I developed an online platform (and supplementary educational resources) to support bridging connections between three distinct YPAR project groups. I then crafted a mixed-method design (SNA, and qualitative interviews) to track natural patterns of communication and dissemination of YPAR strategies within the online platform. Study one focuses attention on exploring changes within the online communication network throughout different stages of the YPAR project. Study two identifies key network and demographic predictors in predicting students' frequency in utilization of YPAR practices overall. Below, I highlight findings from both studies (trends in communication, and dissemination) to inform two central questions: (1) how do students' online YPAR communication patterns differ from traditional online platforms, and (2) by whom are students influenced? Findings have implications for how and if YPAR platforms can be a source of intervention in diversifying communication networks, as well as increasing dissemination efforts.

To date, adolescent communication networks have been primarily identified as following homophilous trends. However, discussing YPAR practices within an online platform may offer a unique intervention point for diversifying connections and relations between historically divided groups. Notably, results from study one provide answers to the first research question, indicating an increase in between-group communication as the YPAR project progresses. Either the period of time or specific action phase of the YPAR project facilitates this change in communication. These results were consistent with two divergent theories. First, *Diffusion of Innovation Theory* suggests that it takes time for innovations to become adopted and utilized (Dearing, 2008; Rogers, 1962; Strang & Sole, 1998). Taking the above into consideration, intervention efforts aimed at diversifying relations between distinct youth groups might consider an extended time

window for implementing the online platform (i.e. a full school year). Second, youth organizing literature stresses the importance of diverse relationship building during times of social action (Christens, & Dolan, 2011, Christens & Kirshner, 2011; Kirshner, 2009). Therefore, intervention efforts may want to utilize the online platform during the social action stages of a YPAR project.

Findings from study two address the second research question, suggesting that the communication partners' behaviors within the online platform influence students' motivation to frequently utilize YPAR strategies more so than the quantity of interactions. These results are consistent with two different theories. First, the results are consistent with *Cohesion Theory*, which stresses that students with ties to alters utilizing the innovation (YPAR practices) are more likely to be inspired to adopt the innovation (Coleman et al., 1966). Second, the results are consistent with *Diffusion of Innovation Theory*, which also suggests that specific alters can have greater influence in spreading information (Rogers, 1962). Thus, students frequently utilizing YPAR practices may have been perceived as more productive and influential members of the group, and therefore had greater influence in motivating students to which they were connected when compared to others. Both findings indicate that intervention efforts ought to be intentional in fostering ties or communication through the explicit pairing of different students (i.e. early vs. late adopters) to increase the speed of dissemination, as well as to reduce disparities in civic participation.

Findings from both studies highlight the potential for forthcoming research in examining the communication and dissemination of YPAR projects within online platforms. Specifically, future models should test whether dyadic features (shared school environment, and shared levels of civic participation) moderate the relation between alters' frequency in use of YPAR practices on students' frequency in use of YPAR practices. In other words, future models should explore

whether shared similarities between students and their alters regarding geographic location and civic participation enhance the effect their alters' behavior (frequency in YPAR practices) has on their own frequency in utilization of YPAR practices. Furthermore, it may be necessary to test whether this moderated effect decreases over time by determining whether geographic and political similarities between alters have less of a significant effect as communication diversifies over time. Results from these future studies would provide researchers with increased understanding regarding who are influential opinion leaders within the network, and whether particular specific predictors of opinion leaders change over time. This would allow researchers to identify at what stage of the YPAR project are specific actors key opinion leaders, and with whom they need to engage to support the dissemination of key practices.

Findings highlight key strategies to support diversity in relationship building and dissemination of YPAR practices within an online platform. Furthermore, both studies stress the importance of intentionally planning (identifying key time frames for implementation), and pairing of students from differing backgrounds, which can support high diversity in communication, reduce disparities in civic participation, as well as increase the speed of dissemination.

This study is one of the first to explore an initiative to scale up YPAR efforts within an online platform. Specifically, the study examines the communication of three diverse YPAR projects within an online platform (study one), and the predictors influencing the frequency in utilization of YPAR efforts within an online platform (study two). Results highlight patterns in both communication and dissemination efforts within the context of YPAR, as well as implications for future efforts both in intervention and research design. In sum, findings suggest that online platforms have promise as a novel tool for both diversifying traditional online

networks between youth, tackling disparities in civic participation, and provide additional opportunities for dissemination and larger scale setting level organizing.

APPENDICES

APPENDIX A

Self-Reflective Piece

Due to my engagement and strong commitment to the study participants, results cannot be fully understood without including my own social location (i.e. positions of power, and privilege), ideological values and beliefs, and role within the classroom (Langhout & Mitchell, 2008). In recognition of the potential for bias in qualitative data analysis, Patton (2002) stresses that the qualitative researcher both name and identify the ideological values, that spur their interaction with both participants, and the data. Thus, my social location, as a young Caucasian woman researcher from a middle class background, with a mother and grandmother who were both teachers -- influenced how I understood the research. I approach research from a participatory paradigm, one that elevates the lived experiences and knowledge of participants (especially the perspective of students). Furthermore, I believe in the democratization of education. In other words, I feel that there are valuable insights that teachers and school staff can learn from students. As a result of my social location, I convey images of privilege and power, when compared with sample participants (i.e. urban, diverse students, primarily from lower socio-economic backgrounds). Thus, I had to continually reflect upon how participants' perceptions of my identity influenced our interactions, the data collection process, and ultimately how I interpreted the data.

In regards to my role in the classroom, I visited each classroom a total of five times throughout the semester. I ran example lesson plans, engaged students in data collection, and met with teachers to support their utilization of the Facebook group. My immersion in the setting provided a foundation from which to base the research, and allowed a more complex understanding of the cultural practices within the setting (Howarth, 2004). While my role was to provide participants with resources (i.e. social media, research tools, example lesson plans etc.),

and emotional support, I was also intentional in letting participants direct their research objectives, scope, and the social action components of their YPAR projects while compiling ongoing memos tracking my own personal biases. Furthermore, while I provided examples and lessons, students and teachers determined how, and to what extent, they and their classrooms would engage in the Facebook group, as well as how the Facebook group personally related to their YPAR project.

APPENDIX B

Student Consent & Assent Forms

Evaluation of the Youth Research Hub: Exploring Online Social Networks
Michigan State University in East Lansing

Parent Permission for Child Participation in Research

Dear Parent/Guardian,

We are asking for you permission to allow your child to participate in a research project about youth's online peer relations by Mariah Kornbluh, M.A. and Jennifer Watling Neal Ph.D. at Michigan State University in East Lansing. Your child has been asked to participate in the research because he/she is participating in the SF PEER RESOURCES, YOUTH RESEARCH HUB. Your child's participation in this study is completely voluntary. We ask that you read this form and ask any questions you may have about providing permission for your child to participate in the research.

What is the purpose of this research?
Three different SF PEER RESOURCES sites are **already** communicating through a secure, private SF PEER RESOURCE facilitated and monitored Facebook group. Youth are getting to know one another, sharing their schooling experiences, and discussing their research action projects. The study will attempt to answer the following questions:

(1) How do online relationships between youth develop over time?
(2) Are there particular characteristics that influence a youth's preference in communicating with other youth (e.g. Are girls more likely to talk to other girls compared to boys)?
(3) How do research ideas and practices spread across an online network?

Lastly this study will be gathering information on communication patterns between your child and other students (e.g. who likes whose posts, who comments on whose posts).

By seeking answers to these questions, this research hopes to provide a better understanding the development of online friendships, sharing ideas, and the use of participatory action research practices, so that in the future, strategies can be identified to strengthen communication between youth across various SF PEER RESOURCE Sites.

Data will be collected through three different forms.
1) In-Person Survey: The first survey given in-person will ask your child to report some general information him/herself including his/her gender, school, and race. In addition, your child will be asked to identify their social group (i.e. athletes, musicians), and report on his/her engagement efforts in helping their schools, neighborhoods, and communities. This survey will be administered twice during PEER RESOURCE time.

2) Online Survey: The second survey will be administered online, three times. You and your child have the option for the survey to be sent electronically through your child's primary email address provided by SF PEER RESOURCES; or, your child can access the

survey link installed directly on the SF PEER RESOURCES Facebook group. Your child's responses will ONLY be collected if we receive both your permission and theirs to participate in the study. This means the online survey will only be emailed to students with a documented permission from. For the Facebook group any student who is an active member of the already existing group can login and take the survey. But, if the research team does not have parental permission these survey responses will be deleted. Please note: NO student has access to other student's online responses. The online survey will take approximately ten minutes to complete. This survey will ask your child what particular research practices they learned (collecting information, making decisions based of their data), as well as where they came across this information (in their PEER RESOURCES classroom, on the Facebook group).

3) Interview: Lastly, several students from each site will be asked to participate in a brief thirty-minute interview during PEER RESOURCE time. In the interviews we will ask your child about their experience on the Facebook group (who did they get advice from, who did they give advice to), and general recommendations to improve the project for the following year. Interviews will be audio taped. Audiotapes will be destroyed after they are transcribed. Any mention of your child's name during the conversation will be replaced by a non-specific title. For example a 11th grade boy.

What are the potential risks and discomforts?

Since, your child is already participating in a private Facebook group as a part of their participation in SF PEER RESOURCES, the risks of this study are minimal, and do not exceed those experienced by your child in their everyday lives. All personal information and content disclosed in these exchanges will not be including in the study. There is a small risk that your child may feel slight discomfort when completing the survey: in identifying their social group, responding to a question on their engagement efforts, listing their research practices they used, and reflecting on their overall experience on the Facebook group. The researchers will take steps to minimize these risks by instructing youth not to discuss their answers to the surveys or interviews, encouraging youth to skip any question that makes them feel uncomfortable, and their right to stop either, survey or interview at any point in time.

What about privacy and confidentiality?

You and your child's confidentiality will be protected to the maximum extent allowable by law. No personal stories your child shares will be told to you, teachers or other students. The only time we will break confidentiality is if your child tells us that they are hurting themself or if someone is hurting them, or if we are required to report something bad that happened to them in their past. No one can link your child's answers to your child's name. Your child's name will never be used in any publications or presentations. Interview findings shared from this study will only indicate whether quotes were made by a boy or girl, and an 11th or 12th grader. The only people who will have access to your child's survey answers are members of the MSU research staff. We will not share his/her name or any of his/her individual survey responses with SF PEER RESOURCES coordinators. All data will be stored in locked filing cabinets in a locked research office at Michigan State University or on password-protected computers, which require specific codes to access. The data will be

destroyed 10 years after the project closes. Only research team members and Michigan State University's Institutional Review Board (a group that makes sure participants' rights are protected) will have access to the data. An aggregated summary of the projects findings, preserving your child's confidentiality, will be submitted to SF PEER RESOURCES and the SFUSD.

Can my child withdraw or be removed from the research study?
You and your child can choose whether your child should participate in this research project by completing the surveys, interview or not. If you agree for your child to participate in this research project you (or your child) may change your mind at any time without consequences of any kind. Your child may also refuse to answer any questions he/she does not want to answer and still remain in the research project.

What are the benefits to taking part in the research?
Although, your child will not directly benefit from your participation in this study (e.g. not affect treatment your child will receive, will not affect your child's grade or evaluation, etc.), general research results will be presented to SF PEER RESOURCES. This information will help identify strategies to strengthen communication between youth across various SF PEER RESOURCE Sites in subsequent years, as well as what research practices are being used. The research also benefits society at large by helping researchers understanding how online relationships develop over time, and if particular characteristics influence youth preference in communicating with specific youth as well as the adoption of particular ideas.

Compensation.
Your child will be provided snacks during both in person surveys and interviews. In addition, your child will receive a $10.00 gift card to Starbucks at the end of the study.

Who should I contact if I have questions?
The researchers conducting this study are Mariah Kornbluh, M.A. and Jennifer Watling Neal, Ph.D. If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury (i.e. physical, psychological, social, financial, or otherwise), please contact Mariah Kornbluh. Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-884-1328. Email: kornblu4@msu.edu. Or Jennifer Watling Neal Ph.D, Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-432-6708. Email: jneal@msu.edu.

What are my child's rights as a research subject?
If you have questions or concerns about your child's rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-423-4503, or e-mail irb@msu.edu or regular mail at 408 W. Circle Drive, 207 Olds Hall, MSU, East Lansing, MI 48824.

Remember: Your child's participation in this research project by completing surveys is voluntary. Your decision on whether or not to allow your child to participate will in no way affect your child's current or future relations with SF PEER RESOURCES. If you decide to allow your child to participate, he/she is free to withdraw from the study at any time. You may keep a copy of this form for your information and to keep for your records.

Please note that if you choose not to allow your child to participate by filling out surveys or participating in the interview, his or her Facebook activity (e.g. who comments on who, and who likes whose posts) will still be included in the study. In addition, we will ask the PEER RESOURCE teacher to provide basic demographic information on your child (e.g. race, gender) and their social grouping (e.g. which social group they belong to? For example: athletes, or artistic students)?

Signature of Subject or Legally Authorized Representative

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I have been given a copy of this form. *(Please check yes or no next to each project component to indicate your consent or refusal to allow your child to participate in the project and sign below.)*

□ **Yes,** I consent OR □ **No,** I do not consent to allow my child to participate in the **in-person survey.**

□ **Yes,** I consent OR □ **No,** I do not consent to allow my child to participate in the **online survey**.

□ **Yes,** I consent OR □ **No,** I do not consent to allow my child to be **interviewed.**

□ **Yes,** I consent OR □ **No,** I do not consent to allow my child to be **audio-recorded during the interview.**

If I did not check yes or no next to the project components, then my signature below may be interpreted as assent to all project components.

Your signature below indicates your voluntary agreement to participate in this study.

_____	_____	_____
Printed name of parent or guardian	Signature of parent or guardian	Date

Evaluation of the Youth Research Hub: Exploring Online Social Networks
Michigan State University in East Lansing

Youth Assent for Participation in in Research

Are you participating in SF PEER RESOURCES? Would you like to be involved in a research project about PEER RESOURCES youth's online friendships? Mariah Kornbluh, M.A. and Jennifer Watling Neal, Ph.D. at Michigan State University in East Lansing would like to ask you some basic question about efforts to better your local school, neighborhood, and community. We ask that your read this form and ask any questions you may have before deciding whether to be involved in the research.

What is the purpose of the study?

As you may already know, three different SF PEER RESOURCES sites are communicating through a secure, private SF PEER RESOURCE facilitated and monitored Facebook group. This study is attempting to understand student's communication across the SF PEER RESOURCES Facebook group. For example, who like's whose posts, and who tends to respond to whose comments? By seeking answers to these questions, this research project hopes to gain a better understanding regarding online communication, sharing ideas, friendships and the use of participatory action research strategies. For example, are students more likely to communicate online with students they share similarities with (e.g. Are girls more likely to talk to other girls then boys)? This project hopes to help future online SF PEER RESOURCE projects.

What will I have to do?

Three different peer resource sites will be involved in this research. If you agree to be involved you will be asked to complete two 20-minute similar surveys (one in February and the second in June 2014), three brief ten minute online surveys, and potentially be selected for a thirty-minute interview:

(1) Survey One (In Person): Will ask you questions on some basic information about yourself (i.e. race, gender, etc.). We will also ask if you engage in particular activities to better your school, neighborhoods, and communities.
(2) Survey Two (Online): Will ask you questions on which particular Youth Participatory Action Research practices you have participated in (collecting data, determining action plans), and where you heard about the particular practice (on the Facebook group, from your teacher). You have two options for taking the online survey
    a. First, we can send a link through your primary email address provided by SF PEER RESOURCES.
    b. Second, you can access the survey through the link provided on the SF PEER RESOURCES Facebook group.
    c. Please Note: You will ONLY be sent the electronic survey if you and your parents give permission to participate in the study. Although, you can take the survey by clicking on the link posted on the Facebook Group, your answers will be deleted if we do not have record of you and your parent's

permission to participate in the study. You will not be able to see other students' personal survey, and not student will be able to see yours.

(3) Interviews (In Person): Will ask you questions about your experience on the Facebook group (who did you get advice from, who did you give advice to), and general recommendations for how we can improve the project for next year.

This study will also examine communication patterns between you and other students. For example: who likes whose posts? Who comments on whose posts?

Here are some other things you should know:

- Your survey and interview responses should reflect your own private views. It is important not to talk about your survey response with other youth, as this may make them feel uncomfortable with their own survey responses.

- Only members of our research team will see your answers. We will not share your name or any of your individual answers with SF PEER RESOURCES.

- Interviews will be audio taped. Audiotapes will be destroyed after they are transcribed. Any mention of your name that occurs during conversation will be replaced by a nonspecific title. For example a 11th grade boy. Findings shared from this study, will only indicate whether quotes were made by a boy or girl, and an 11, or 12th grader.

- No personal stories you share will be told to parents, teachers, or other students. The only time we will tell someone what you specifically say is if you tell us that you are hurting yourself or that someone is hurting you, or if we are required to report something bad that happened to you in the past.

- Your refusal to participate will involve no penalty or loss to benefits that the subject is otherwise entitled. In other words, you can refuse to participate, quit the study at any point in time. Your lack of participation will not be punished in any way, not from the researcher, school or SF PEER RESOURCES.

- Your confidentiality will be protected to the maximum extent allowable by law. Because we are doing multiple waves of data collection through surveys and the Facebook group, we need a way to link your information. You will be given an ID #. We will only have one master list linking your name to the ID# which will be kept in a password-protected computer. After we complete all of the data collection, we will destroy this document and will only have the surveys with the ID #'s on them. Your name will never be used in any publications or presentations. Only the MSU research team will be able to link you survey responses to your ID #.

- If you choose not to be involved, your PEER RESOURCES coordinator will come up with another activity for you while others participate in the surveys (example: silent reading).

- All data will be stored in locked filing cabinets in a locked research office at Michigan State University or on password-protected computers, which require specific codes to access. The data will be kept for at least ten years after the project closes. Only research team members and Michigan State University's Institutional Review Board (a group that makes sure participants' rights are protected) will have access to the data.

- A summary of the projects findings, preserving your confidentiality, will be submitted to SF PEER RESOURCES and San Francisco School District (SFUSD).

What are the risks?

Since you are already participant in a private Facebook group as a part of your participation in SF PEER RESOURCES, the risks to this study are minimal, and do not exceed those experienced in every day life. There is a slight chance you may feel discomfort when completing the surveys by: identifying your social group, responding to a question on your engagement efforts, listing core Youth Participatory Action Research practices you used, or during the interview reflecting on your overall experience on the Facebook group. The researcher will take steps to minimize these risks by encouraging you and your peers to avoid discussing answers to the survey or interview, reminding you of your right to skip any question that makes your feel uncomfortable, as well as the ability to stop either surveys or the interview at any point in time.

What are the benefits?

You will not directly benefit from your participation in this study (e.g. not affect treatment you will receive, will not affect your grade or evaluation, etc.). Your participation in this study may contribute to SF PEER RESOURCES future projects in helping identify strategies to strengthen online communication. This study may also contribute to larger society helping researchers understanding how online relationships develop over time, and if particular characteristics influence youth preference in communicating with specific youth.

Compensation.

Snacks will be provided when surveys are distributed during class time. In addition, if you choose to participate, you will receive a $10.00 gift card to Starbucks at the end of the study.

Who should I contact if I have questions?

The researchers conducting this study are Mariah Kornbluh, M.A., and Jennifer Watling Neal, Ph.D. If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury (i.e. physical, psychological, social, financial, or otherwise), please contact Mariah Kornbluh. Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-884-1328. Email: kornblu4@msu.edu. Or Jennifer Watling Neal Ph.D, Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-432-6708. Email: jneal@msu.edu.

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about

this study you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-423-4503, or e-mail irb@msu.edu or regular mail at 408 W. Circle Drive, 207 Olds Hall, MSU, East Lansing, MI 48824.

Please note that this consent form applies to the direct completion of both the in person and online survey, and the potential interview. If you choose not to allow participating your Facebook activity (e.g. who you comment on, and whose posts you like) will be included. In addition, basic demographic information, your race, gender, and social group identity (e.g. athletes artistic students) will be collected your PEER RESOURCE teacher.

Signature of Youth

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered. *(Please check yes or no next to each project component to indicate your assent or refusal of participation in the project and sign below.)*

□ **Yes,** I assent OR □ **No,** I do not assent to participating **in-person survey**.

□ **Yes,** I assent OR □ **No,** I do not assent to participating in the **online survey**.

□ **Yes,** I assent OR □ **No,** I do not assent to being **interviewed.**

□ **Yes,** I assent OR □ **No,** I do not assent to being **audio-recorded during the interview.**

If I did not check yes or no next to the project components, then my signature below may be interpreted as assent to all project components.

_____	_____	_____
Name of Youth	Signature of Youth	Date

APPENDIX C

Verbal Permission Procedure

1. Introduction.

Hi there,

Thank you so much for your time. I just want to confirm you are _____(YOUTH's) parent or guardian?

And your name is? _____.

Hi there, my name is Mariah Kornbluh. I am a researcher at Michigan State University.

Your child has been asked to participate in the research because he/she is participating in the SF PEER RESOURCES, YOUTH RESEARCH HUB.

Would you be open to having your child participate in a research project about youth's online peer relations, this participation is voluntary. I will read the following information to you, please ask any questions you may have about providing permission for your child to participate in the research.

Three different SF PEER RESOURCES sites are already communicating through a secure, private SF PEER RSOURCES facilitated and monitored Facebook group.

Youth are getting to know one another, sharing their schooling experiences, and discussing their research action projects.

The study will attempt to answer the following research questions:

- How do online relationships between youth develop over time?
- Are there particular characteristics that influence a youth's preference in communicating with other youth (e.g. Are girls more likely to talk to other girls compared to boys)?
- How do research ideas and practices spread across an online network?
- Lastly, communication patterns between your child and other students on the Facebook Group will be tracked (e.g. who likes whose comments, who comments on whose posts).

By seeking answers to these questions, this research hopes to provide a better understanding the development of online friendships, sharing ideas, and the use of participatory action research practices, so that in the future, strategies can be identified to strengthen communication between youth across various SF PEER RESOURCE Sites.

Would you be open to having your child participate?

- If yes, PROCEED.
- If No *(Do you have any questions or concerns regarding the study, I can go over the logistics of the study, along with you and your child's rights?)*

    - If Yes (Answer any concerns, proceed with consent process.)
    - If No (Thank the parent for their time, apologize for the inconvenience.)

Great let me go over the consent form with you, which will give you all the additional information

about the study, regarding your and your child's rights.

- *Please stop me if you have any questions.* Proceed to #2. Consent Form.

2. Consent form:

<u>If you do agree to participate your child will:</u>

- The researchers will also ask your child to participate in two surveys, and one potential thirty-minute interview.
- The first survey given in-person will ask your child to report some general information him/herself including his/her gender, school, and race. In addition, your child will be asked to identify their social group (i.e. athletes, musicians), and report on his/her engagement efforts in helping their schools, neighborhoods, and communities. This survey will be administered twice during PEER RESOURCE time.
- The second survey will be administered online three times. You and your child have the option for the survey to be sent electronically through your child's primary email address provided by SF PEER RESOURCES; or, your child can access the survey link installed directly on the SF PEER RESOURCES Facebook group. Your child's responses will ONLY be collected if we receive both your permission and theirs to participate in the study. This means the online survey will only be emailed to students with a documented permission from. For the Facebook group any student who is an active member of the already existing group can login and take the survey. But, if the research team does not have parental permission these survey responses will be deleted. Please note: NO student has access to other student's online responses.
- The online survey will take approximately ten minutes to complete. This survey will ask your child what particular research practices they learned (collecting information, making decisions based of their data), as well as where they came across this information (in their PEER RESOURCES classroom, on the Facebook group).
- Lastly, several students from each site will be asked to participate in a brief thirty-minute interview during PEER RESOURCE time. In the interviews we will ask your child about their experience on the Facebook group (who did they get advice from, who did they give advice to), and general recommendations to improve the project for the following year. Interviews will be audio taped. Audiotapes will be destroyed after they are transcribed. Any mention of your child's name during the conversation will be replaced by a non-specific title. For example a 11th grade boy.

<u>Let me address any potential risks:</u>

- First, since, your child is already participating in a private Facebook group as a part of their participation in SF PEER RESOURCES, the risks of this study are minimal, and do not exceed those experienced by your child in their everyday lives.
- All personal information and content disclosed in these exchanges will not be including in the study. There is a small risk that your child may feel slight discomfort when completing the survey: in identifying their social group, responding to a

question on their engagement efforts, listing their research practices they used, and during the interview reflecting on their overall experience on the Facebook group.
- The researchers will take steps to minimize these risks by instructing youth not to discuss their answers to the surveys or interviews, encouraging youth to skip any question that makes them feel uncomfortable, and their right to stop either, survey or interview at any point in time.

<u>In addition, there are a few benefits:</u>
- Although, your child will not directly benefit from your participation in this study (e.g. not affect treatment your child will receive, will not affect your child's grade or evaluation, etc.), general research results will be presented to SF PEER RESOURCES. This information will help identify strategies to strengthen communication between youth across various SF PEER RESOURCE Sites in subsequent years, as well as what practices are being used.
- The research also benefits society at large helping researchers understanding how online relationships develop over time, and if particular characteristics influence youth preference in communicating with specific youth as well as the adoption of particular ideas.

There is some compensation for your child's participation:
- Your child will be provided snacks during both in person surveys and interviews. In addition, your child will receive a $10.00 gift card to Starbucks at the end of the study.

<u>I am now going to address how you and your child's privacy will be protected:</u>
- You and your child's confidentiality will be protected to the maximum extent allowable by law. No one can link your child's answers to your child's name. Your child's name will never be used in any publications or presentations.
- The only time we will break confidentiality is if your child tells us that they are hurting themself or if someone is hurting them, or if we are required to report something bad that happened to them in their past. No one can link your child's answers to your child's name. Your child's name will never be used in any publications or presentations. Interview findings shared from this study will only indicate whether quotes were made by a boy or girl, and an 11th or 12th grader.
- The only people who will have access to your child's survey answers are members of the MSU research staff. We will not share his/her name or any of his/her individual survey responses with SF PEER RESOURCES coordinators.
- All data will be stored in locked filing cabinets in a locked research office at Michigan State University or on password-protected computers, which require specific codes to access. After, 10 years, any paper copies of the data will be destroyed. Only research team members and Michigan State University's Institutional Review Board (a group that makes sure participants' rights are protected) will have access to the data. An aggregated summary of the projects findings, preserving your child's confidentiality, will be submitted to SF PEER RESOURCES and the SFUSD.

Please know:
- You and your child can choose whether your child should participate in this research project by completing the surveys, interviews or not. If you agree for your child to participate in this research project you (or your child) may change your

mind at any time without consequences of any kind. Your child may also refuse to answer any questions he/she does not want to answer and still remain in the research project.

If you do have questions or concerns:

- Myself, Mariah Kornbluh, M.A, will be conducting the research project. I am a graduate student at Michigan State University. Jennifer Watling Neal, Ph.D. a faculty member at Michigan State University, will also oversee this project. If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury (i.e. physical, psychological, social, financial, or otherwise), please contact Mariah Kornbluh. Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-884-1328. Email: kornblu4@msu.edu. Or Jennifer Watling Neal Ph.D, Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-432-6708. Email: jneal@msu.edu.
- If you have any questions about your child's rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-423-4503, or e-mail irb@msu.edu or regular mail at 408 W. Circle Drive, 207 Olds Hall, MSU, East Lansing, MI 48824.Now this study is asking for your permission, your child does not have to participate:
- Your decision on whether or not to allow your child to participate will in no way affect your child's current or future relations with SF PEER RESOURCES. If you decide to allow your child to participate, he/she is free to withdraw from the study at any time.
- Please note that if you choose not to allow your child to participate by filling out surveys, or participating in the interview his or her Facebook activity (e.g. who comments on who, and who likes whose posts) will still be included in the study. In addition, we will ask the PEER RESOURCE teacher to provide basic demographic information on your child (e.g. race, gender) and their social grouping (e.g. which social group they belong to? For example: athletes, or artistic students)?
- Do you have any questions or concerns?

1. Collect Consent:

Now I am going to ask you if you are comfortable having your child participate in this study. Have I adequately informed you of the study? Have all your questions been answered to your satisfaction? Now I am going to ask for your permission or refusal to have your child participate in each component of the project.

Do you give consent to have your child participate in the: (a) in-person survey, (b) online survey, (c) interview, and (d) audio recording of the interview.

1. If (Yes) Record Consent on form.

    a. For my records I am going to record your child's full name (State Name) your consent specifically regarding each component of the project, "I

voluntarily agree to allow my child to participate (or not participate) in the study by stating Yes or No for each component of the study:

□ **Yes,** I consent OR □ **No** I do not consent to allow my child to participate in the in-person survey.

□ **Yes,** I consent OR □ **No** I do not consent to allow my child to participate in the online survey.

□ **Yes,** I consent OR □ **No** I do not consent to allow my child to be interviewed.

□ **Yes,** I assent OR □ **No** I do not consent to allow my child to be audio-recorded during the interview.

That you were fully informed of the study, were provided adequate information, and have had opportunity to ask questions, and that these questions have been answered to your satisfaction.

2. If (No)

Thank you for taking the time to speak with me.

4. Record Consent on Verbal Parental Consent Form.

5. Thank Parents:

Thank you so much for taking the time to speak with me. Please feel free to contact me if you have any questions or concerns.

Take care.

APPENDIX D

Site Coordinator Consent Form

Evaluation of the Youth Research Hub: Exploring Online Social Networks
Michigan State University in East Lansing

SF PEER RESOURCES Site Coordinator Permission to Participate in Research

Dear SF PEER RESOURCES site coordinator,

We are asking for you permission to participate in a research project about youth's online peer relations by Mariah Kornbluh, M.A. and Jennifer Watling Neal Ph.D. at Michigan State University in East Lansing. Your have been asked to participate in the research because you are overseeing one of the SF PEER RESOURCES, sites engaging in the YOUTH RESEARCH HUB.

Your participation in this research by completing thirty-minute form indicating all your youth's background in January is voluntary. We ask that you read this form and ask any questions you may have providing permission to participate in the research.

Three different SF PEER RESOURCES sites are **already** communicating through a secure, private SF PEER RESOURCE facilitated and monitored Facebook group. Youth are getting to know one another, sharing their schooling experiences, and discussing their research action projects. The study will attempt to answer the following questions:

(1) How do online relationships between youth develop over time?
(2) Are there particular characteristics that influence a youth's preference in communicating with other youth (e.g. Are girls more likely to talk to other girls compared to boys)?
(3) How do research ideas and practices spread across an online network?

By seeking answers to these questions, this research hopes to provide a better understanding the development of online friendships, so that in the future, strategies can be identified to strengthen communication between youth across various SF PEER RESOURCE Sites.

The researchers will also ask you to report on some general information regarding each of your youth's gender, school, and race. This information will be useful if the study happens to have any missing data, as well as confirm youth responses.

What are the potential risks and discomforts?
No foreseen risks are anticipated. There is s light risk you may feel discomfort identifying a youth's race or gender. You can quit the study at any time if you feel uncomfortable. You will not be punished in any way if you decide to quit the study.

What about privacy and confidentiality?

Only members of our research team will see your answers. We will not share your name or any of your individual answers with SF PEER RESOURCES. Your confidentiality will be protected to the maximum extent allowable by law. No one can link your answers to your name. Your name will never be used in any publications or presentations.

All data will be stored in locked filing cabinets in a locked research office at Michigan State University or on password-protected computers, which require specific codes to access. After 10 years, any paper copies of the data will be destroyed. Only research team members and Michigan State University's Institutional Review Board (a group that makes sure participants' rights are protected) will have access to the data. An aggregated summary of the projects findings, preserving your child's confidentiality, will be submitted to SF PEER RESOURCES and the SFUSD.

Can I withdraw or be removed from the research study?

You can choose whether you should participate in this research project by completing the youth forms or not. If you agree to the forms for this research project you may change your mind at any time without consequences of any kind. Your may also refuse to answer any questions you do not want to answer and still remain in the research project.

What are the benefits to taking part in the research?

You will not directly benefit from your participation in this study (e.g. not affect your job, or evaluation, etc.). General research results will be presented to SF PEER RESOURCES. This information will help identify strategies to strengthen communication between youth across various SF PEER RESOURCE Sites in proceeding years, as well as what research practices spread across are being used. The research also has benefits for society at large helping researchers understanding how online relationships develop over time, and if particular characteristics influence youth preference in communicating with specific youth as well as the adoption of particular ideas.

Compensation.

You will receive a $20.00 gift certificate to Starbucks for as a token of our appreciation for you taking the time to complete our survey.

Who should I contact if I have questions?

The researchers conducting this study are Mariah Kornbluh, M.A. and Jennifer Watling Neal, Ph.D. If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury (i.e. physical, psychological, social, financial, or otherwise, please contact Mariah Kornbluh. Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-884-1328. Email: kornblu4@msu.edu. Or Jennifer Watling Neal Ph.D, Mailing Address: 316 Physics Rm 262, East Lansing, MI 48824. Phone Number: 517-432-6708. Email: jneal@msu.edu.

What are my rights as a research subject?

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study you may contact, anonymously if you wish, the Michigan State University's

Human Research Protection Program at 517-355-2180, Fax 517-423-4503, or e-mail irb@msu.edu or regular mail at 408 W. Circle Drive, 207 Olds Hall, MSU, East Lansing, MI 48824.

Remember: Your participation in this research project by completing the forms is voluntary. Your decision on whether or not to o participate will in no way affect your current or future relations with SF PEER RESOURCES.

Signature of Youth

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered.

Your signature below indicates your voluntary agreement to participate in this study.

_____	_____	_____
Name of Site Coordinator	Signature of Site Coordinator	Date

APPENDIX E

In-Person Site Coordinator Survey

This survey collects information regarding students' age, gender, and other basic information in order for us to better understand whose participating in the Youth Research Hub.

For the questions below, please fill in the circle/circles that best matches student:_____.

1. What is this student's gender?

- ○ Male
- ○ Female
- ○ Transgender
- ○ Other (Describe): _____

2. What race/ethnicity does this student identify with (choose all that apply)?

- ○ American Indian/Alaska Native
- ○ Asian
- ○ Black/ African- American
- ○ Hispanic or Latina/o
- ○ Native Hawaiian/other Pacific Islander
- ○ White
- ○ Other (Describe): _____

3. What high school does this student attend?

- ○ Lowell
- ○ Mission
- ○ Lincoln

4. What grade is this student in?

- ○ Freshmen
- ○ Sophomore
- ○ Junior
- ○ Senior

APPENDIX F

In-Person Student Survey

Name: _____
Date: _____

Instructions:

Hello there! We ask that you fill out this brief survey. This survey collects information regarding your age, gender, and other basic information in order for us to better understand whose participating in the Youth Research Hub.

For the questions below, please fill in the circle/circles that best match your response.

Thank you for your time and participation!

1. What is your gender?
   - ○ Male
   - ○ Female
   - ○ Transgender
   - ○ Other (Describe): _____

2. What race/ethnicity do you identify with (choose all that apply)?
   - ○ American Indian/Alaska Native
   - ○ Asian
   - ○ Black/ African- American
   - ○ Hispanic or Latina/o
   - ○ Native Hawaiian/other Pacific Islander
   - ○ White
   - ○ Other (Describe): _____

3. What high school do you attend?
   - ○ Lowell
   - ○ Mission
   - ○ Lincoln

4. What grade are you in?
   - ○ Freshmen
   - ○ Sophomore
   - ○ Junior

○ Senior

5. Which group or groups would you say you belong to (choose all that apply)?

○ Artistic Kids	○ Athletes	○ Ballers
○ Emo	○ Gamers	○ Gangsters
○ Geeks	○ Goths	○ Hipsters
○ Jocks	○ LGBT Students	○ Musicians
○ Nerds	○ Paisas	○ Popular Kids
○ Punks	○ Recently Immigrated	○ Regular Kids
○ Rockers	○ Skaters	○ Other (Describe):

5. The following is a list of school, community and political activities that people can get involved in. For each of these activities, fill in the circle indicating whether, **in the last year (2013)…**	You Never Did This	You Did This One or Twice	You Did This A Few Times	You Did This A Fair Bit	You Did This A Lot
Visited or helped out people who were sick	○	○	○	○	○
Took care of other families' children (on an unpaid basis)	○	○	○	○	○
Participated in a religious group	○	○	○	○	○
Participated in or helped a charity organization	○	○	○	○	○
Participated in an ethnic club or organization	○	○	○	○	○
Participated in a political party, club or organization.	○	○	○	○	○

5. The following is a list of school, community and political activities that people can get involved in. For each of these activities, fill in the circle indicating whether, **in the last year (2013)…**	You Never Did This	You Did This One or Twice	You Did This A Few Times	You Did This A Fair Bit	You Did This A Lot
Participated in a social or cultural group or organization (e.g., a choir)	○	○	○	○	○
Participated in a school academic club or team.	○	○	○	○	○
Participated in a sports team or club.	○	○	○	○	○
Led or helped out with a children's group or club.	○	○	○	○	○
Helped with a fund-raising project	○	○	○	○	○
Helped organize neighborhood or community events (e.g., carnivals, potluck dinners, etc.)	○	○	○	○	○
Helped prepare or make verbal and written presentations to organizations, agencies, conferences or politicians.	○	○	○	○	○
Did things to help improve your neighborhood (e.g., helped clean neighborhood)	○	○	○	○	○

5. The following is a list of school, community and political activities that people can get involved in. For each of these activities, fill in the circle indicating whether, **in the last year (2013)…**	You Never Did This	You Did This One or Twice	You Did This A Few Times	You Did This A Fair Bit	You Did This A Lot
Gave help (e.g. money, food, clothing, rides) to friends or classmates who needed it	○	○	○	○	○
Served as a member of an organizing committee or board for a school club or organization.	○	○	○	○	○
Wrote a letter to a school or community newspaper or publication.	○	○	○	○	○
Signed a petition	○	○	○	○	○
Attended a demonstration.	○	○	○	○	○
Collected signatures for a petition drive.	○	○	○	○	○
Contacted a public official by phone or mail to tell him/her how you felt about a particular issue.	○	○	○	○	○
Joined in a protest march, meeting or demonstration.	○	○	○	○	○
Got information about community activities from a local community center	○	○	○	○	○

5. The following is a list of school, community and political activities that people can get involved in. For each of these activities, fill in the circle indicating whether, **in the last year (2013)…**	You Never Did This	You Did This One or Twice	You Did This A Few Times	You Did This A Fair Bit	You Did This A Lot
Volunteered at a school event or function	○	○	○	○	○
Helped people who were new to your country	○	○	○	○	○
Gave money to a cause	○	○	○	○	○
Worked on a political campaign	○	○	○	○	○
Ran for a position in student government	○	○	○	○	○
Participated in a discussion about a social or political issue	○	○	○	○	○
Volunteered with a community service organization	○	○	○	○	○
Participated in civil rights group or organization	○	○	○	○	○
Signed an email or written petition about a social or political issue	○	○	○	○	○
Participated in a human rights, gay rights or women's rights	○	○	○	○	○

5. The following is a list of school, community and political activities that people can get involved in. For each of these activities, fill in the circle indicating whether, **in the last year (2013)…**	You Never Did This	You Did This One or Twice	You Did This A Few Times	You Did This A Fair Bit	You Did This A Lot
organization or group					

APPENDIX G

Exit Student Interview

Interview Questions:

1. Describe, to me your overall class project?
   Probes:
   i. What were the different steps your class took?
   ii. How did you come up with your class issue?
   iii. What information did you gather on this topic?
   iv. What action step did your class take?
2. Now, reflecting back on your experience with the PEER Resource Facebook group, what was your overall experience participating in the Facebook group? For example…
   a) reading other students' posts
   b) posting your responses and ideas
   c) commenting on other students' posts
   d) liking other students' posts

   Probes:
   i. What did you like or dislike about the Facebook group?
   ii. How would you describe the overall process?
3. What was your communication like with other students on the Facebook group? By communication, I am referring to "liking" a particular post or commenting on a specific post.
   Probes:
   i. With whom did you choose to communicate?
   ii. Did you tend to communicate with the same (e.g. with students of the same gender, attended the same school) or different students (students of a different gender, attended a different school)?
   iii. What factors, if any, made it easy to communicate with students?
   iv. What, if any, barriers prevented you from communicating with students?
4. Now reflecting on this entire experience, could you describe a specific time in which you "liked" a particular post?
   Probes:
   i. What about this post caught your attention?
   ii. What, if any role, did the student who created the post, have on your decision to like the post?
   iii. Is this process typical of other instances when you have "liked" a particular post?
5. Now, think back and describe a time when you commented on a particular post?
   Probes:
   i. What about that post caught your attention?
   ii. What contributed to your decision to comment on that particular post?
   iii. What, if any role, did the student who created the post, have on your decision to comment?
   iv. Is this process similar to other time points when you have commented on a particular post?
6. What, if any, information did you receive from the Facebook group that you found useful or helpful in guiding your own class project?
   Probes:
   i. Can you tell me of a time when you found a piece of information that was helpful?
      a) What was the information?
      b) How did this particular piece of information help you?
   ii. Can you recall a time when a particular piece of information wasn't helpful?

a) What was that information?
b) Why did you find that particular piece of information to be unhelpful?

7. Were there any ideas or activities shared on the Facebook group that you discussed in your PEER RESOURCES group?
   Probes:
   i. What were they?
   ii. In your opinion, did Facebook ideas or activities reach your PEER RESOURCE group? For example:
      a) Did you see any activities posted on the Facebook group by other schools that were then discussed in your PEER Resource classroom?
      b) Did your classmates bring any ideas from the Facebook group back to the classroom?
      c) How responsive were your classmates to these ideas or activities?
8. What, if any, ideas or activities of the other students caught your attention on the Facebook Group?
   Probes:
   i. Did you use any of these ideas or activities for your class project? If so…
      a) What were the ideas or activities?
      b) What made these ideas or activities appealing?
   ii. Did it matter who posted these ideas or activities?
      a) If so, whose particular posts did you pay attention to?
      b) What about this person caught your attention?
9. How would you describe your role in your class project?
   Probes:
   i. For which activities were you responsible?
   ii. With whom did you tend to work?
   iii. To whom did you tend to give advice?
   iv. From whom did you tend to get advice?
10. How would you describe your role in the Facebook group?
    Probes:
    i. With did you tend to communicate?
    ii. To whom did you tend to give advice?
    iii. Whose posts did you tend to comment on/"like"?
11. What if any recommendations do you have for future PEER Resource projects who use a Facebook group?
    Probes:
    i. How could this improve the Facebook group?
    ii. Did you notice any particular barriers or challenges when participating in the Facebook group?
       a) What were they?
       b) Do you have any suggestions on ways to address these hurdles?

APPENDIX H

Codebook

Table 12. Code Book (Study One)

Code	Definition	Examples
Facilitators in Communication	Factors (circumstances) that promoted or fostered communication within the Facebook group.	Examples: students attending the same school, or posts utilizing social media, etc.
Same School	Attending the same school (i.e. YPAR classroom) promoted communication within the Facebook group. For instance, students articulated feeling more comfortable communicating with their peers/classmates. Furthermore, students noted that they could more easily relate to their classmates.	"*I only commented on my classmates' posts. I mean we've gotten to know each other. We did a lot of stuff together, talking about our lives. I already knew what their stuff was about, so it was much easier to look at the ideas that they posted."*
Relevance	The relevance of a particular post to a viewer, also promoted communication within the Facebook group. For instance, students described posts they commented on as catching their interest, and that they resonated with some aspect their own lives.	*"That depression post related to me, because I felt like I was in that state. And I personally thought, 'wow, this post you can relate to'. Because, I have been there, and I can't blame them."*
Seek Solutions & Advice	Posts that openly solicited alternative opinions, or welcomed outside advice promoted communication within the Facebook group. For instance, students noted that when they had a clear invitation to offer their opinion with students that they didn't personally know, they were less concerned about having an awkward interaction.	"*I commented if anyone asked a question, 'like what course of action could you take', maybe from an outside perspective, or if it was just a question, and it really was important to them"*
Social Media	Posts employing social media (i.e. memes, comical graphical images, photographs, and video) also promoted communication within the online platform. Students noted that they tended to comment or react to posts that visually captured social issues occurring within the school environment. Students also stressed that social media was	*"The pictures, they caught your attention, and you went to those, rather then a full block of text"*

Table 12. (cont'd)

Code	Defintion	Examples
	easier to read, and react to rather then text.	
Barriers in Communication	Obstacles (i.e. barriers, hindrances) in communication within the Facebook group.	Examples: students avoiding uncomfortable circumstances, posts that were vague and difficult to interpret, etc.
Avoiding Discomfort	The act of avoiding uncomfortable situations (i.e. new social interactions) was one barrier that hindered communication within the online platform. For instance, students expressed concern not knowing how students from other schools would perceive their comments.	"*It all goes back to the awkwardness. I thought that they would be like 'oh, you didn't even go to my school, why are your commenting on this?'"*
Vague Posts	Posts that were vague or ambiguous hindered students communication within the online platform. Furthermore, students articulated that when they didn't fully understand a post, they felt they couldn't offer advice.	"*Because when they describe it, they know what is exactly happening in their project, but to someone who's reading it from an outside perspective it is kind of hard to grasp what exactly they are doing, and how it's going."*

Table 13. Code Book (Study Two)

Code	Definition	Examples
Barriers in Dissemination	Challenges to dissemination of YPAR efforts within the Facebook group.	Examples: limited structural or classroom supports, and divergent YPAR topics, etc.
Limited Class Discussion	Limited class discussion and instructional support regarding research activities on the Facebook group was a barrier in students' utilization of YPAR activities overall. Students articulated a disconnect between the work they were doing in class and their participation on the Facebook group.	*"It was more of an individual process, like we didn't discuss the Facebook group in class. I mean if we did it was like really limited."*
Different Topics	Having divergent YPAR topics was a barrier in the dissemination of YPAR activities within the Facebook group. For instance, students articulated struggling to see how what other groups posted could transfer to their own research projects.	*"It was interesting. But I just don't think anything they posted applied to our project. I think it just applied to theirs. Again, it was interesting, but we couldn't really use it."*
Examples of Dissemination	Instances of dissemination within the Facebook group regarding the utilization of YPAR practices.	Examples: School B getting the idea to fundraise from school C, observing YPAR activities on the Facebook group inspired feeling of motivation, etc.
Receiving Ideas on the Facebook Group	Observing students' YPAR activities on the Facebook group inspired some students to take action. These instances varied from replicating ideas, to inspiring plans for future use in employing specific YPAR activities, to overall motivation to continue forward in their research.	*"I got the idea from other students on the Facebook group. They said 'do a fundraiser, to get, like, more resources'. I was calling my, like, classmate over, and I was like, 'look at this, this is a really good idea'. I was copying, and pasting it. And she was like, 'oh we should do this'. I said, 'okay."*

APPENDIX I

Case Summaries

Site A.

Interviewee 258: Female, Asian, Low Civic Participation, and High Degree Centrality within the Facebook Group

Interviewee 258 is a reflective, thoughtful, and inquisitive senior. Observing her in class, she actively participated in-group discussions (sharing ideas, and providing input), and was notably communicative on the Facebook group. She appeared well liked by her peers as she was often sought after for advice, and tended to solicit and consider alternative perspectives. For example, she figured out it was my birthday during one of my class visits, and announced it to the class. Overall, she seemed less aware of social cues, or was simply less determined to fit in with the group of seniors, who often appeared less engaged in the YPAR class (often planting themselves on the couch, and engrossed in their phones during class discussion). Interviewee 258 was more proactive working with other students (especially the juniors) to keep the project moving forward. She was taking several advanced placement courses during her senior year, which she felt conflicted at times with the YPAR project (particularly, when she had to miss a week of class due to AP testing). She had plans to attend a local state college the following year.

Although, only joining the classroom during the second semester of their research project, she jumped full force into the YPAR project. For instance, she described both entering and analyzing the student body survey results regarding school counselor availability in *survey monkey* (a quantitative software tool), which allows students to run analysis, and examine demographic patterns (i.e. race, gender, grade, etc.) across respondents. *"Survey monkey is really good because we can see trends, let's say ethnicity, or uh females, I mean gender, and also grade level. I think that the ninth graders don't go to their counselors that often."* As she began

to engage in data analysis, she also formed new research questions and areas of inquiry guided by her own life experiences.

> *Student: We didn't do it by income level, but I think that would have been really interesting if we did it by socioeconomic status.*
>
> *Interviewer: Did you have any predictions on what you think might have happened?*
>
> *Student: I was kind of interested in seeing because I'm like, low income.*
>
> *Interviewer: Yeah.*
>
> *Student: Also, cause I felt like, uh low-income students would go to their counselors more, because of the access to resources.*

She also described how conducting interviews with college counselors in the larger school district provided the group with insightful information to guide their social action strategy (i.e. petitioning for a college counselor). She noted that having a college counselor, which other schools in the district had, could help relieve their school counselors' workload providing them with greater opportunity to focus on supporting students' social and emotional needs.

At the time of her interview, she was working on raising public awareness around the need for a college counselor to the serve the student body. For instance, her group had posted a letter in the PTA newsletter, and was working to develop a petition for students to sign that encouraged the administration to hire an additional part-time college counselor. During the interview, she articulated the importance of gaining support from the student body. *"I think people will notice, and take us seriously if we come with a petition that says 'hey, 500 students think this is a good idea'"*.

In the context of the Facebook group, she overall enjoyed the experience of participating. She described the environment as friendly and supportive. "*I think everybody is really nice, there*

are some helpful comments and encouraging words." She expressed interest in learning about different schools, and the diverse social issues they were tackling. Her biggest complaint was that she wished other students had taken the Facebook group more seriously and posted on the platform with more foresight and intentionality. "*I feel like sometimes people like post random things or like, they're just like having fun—or like you know like just random posts".*

She noted that she tended to communicate mostly with her own classmates, primarily because she understood the context and circumstances of their YPAR project. She also indicated struggling to communicate with students from other schools. At times she had trouble understanding the context of their posts, or simply what they were saying (i.e. specific jargon). This may have been a result of the discrepancy in academic norms among the various schools, as School A is a high performing magnet school ranked top in the state where School B and C are notably lower. She noted when students from other schools were descriptive, she had an easier time understanding and reacting to their posts compared to students who used general or abstract terms in their posts. "*I think to have students be more descriptive. So the way they describe it is like this or that, it's really general, but then to someone's whose reading it from an outside perspective it is kind of hard to grasp what exactly they are doing and how it's going."*

Although, she tended to communicate with her classmates, Interviewee 258 actively looked for opportunities to communicate with students from different schools. For instance, she found School B's project (i.e. improving the sexual health curriculum) very interesting, relatable, and provoked her to reflect upon the available resources within her own school environment. Thus, she offered advice on alternative ways to view health, which she had been exposed to in her own health class.

Student: I commented on the health one. 'What do you do in health? What kind of the things do they teach in your health classes?' Because, I didn't realize that they, I don't know that they don't have a health class, or they just have bad, it's just insufficient?

Interviewer: Yeah, I think that's more what they are thinking.

Student: I thought that was really important. One because, I think teenagers really need to know about like their health. People just think of health as just sex prevention, HIV prevention, and birth prevention. But I remember that in my health class they made a huge emphasis on mental health or spiritual health, emotional health. I think that is one-thing students really have to realize, especially at this age, when you know, your hormones are like out of whack. That it's not just you're physical well being that you have to be really careful of mental health and like kind of finding your way into adulthood. I think that is why that caught my eye, if they don't have good health classes, they can't realize all this stuff. And I think I took for granted the health classes at [SCHOOL A], like people think of it as kind of a joke class, I guess. But to SCHOOL B it's really important because they don't have health classes.

Interviewee 258 noted that she tended to comment on posts that she could relate to, provide ideas, or give advice to other students. *"What I noticed about my comments I don't really say 'cool' or 'interesting' stuff like that. I only really answer the ones that have questions."* She expressed a desire to communicate with other students in a meaningful way (i.e. providing advice or ideas). She didn't identify selecting students to communicate with based on their gender, race/ethnicity, or social group identification. For instance, she noted, "*I never really looked at their profile, I didn't even know who posted"*, rather she was more influenced by whether she could relate to the posts, or if there was an opening to insert her opinions, or offer

advice that could be of help. Notably, she didn't indicate needing or seeking out the advice of other students from different schools. It appeared she viewed her role as more of a helper who provided guidance to others.

Interviewee 258 also articulated that posts utilizing social media tended to catch her attention and interest in the Facebook group. "*I think the visuals helped a lot more. Cause it catches your eye."* She noted that she tended to react more to visuals, and had wished that more students had engaged in using social media to galvanize conversation, or share their experiences. Although Interviewee 258 didn't employ any specific YPAR activities that she learned about from the Facebook group to her own YPAR project, she indicated being motivated and inspired by the work of other groups. In particular, she expressed her admiration for School B fundraising for their sexual health curriculum.

> *I think [SCHOOL B] was going to do a fundraiser. I thought that was good because if they can't get the budget. If the school was like, 'oh we don't have the budget for health classes', they were doing some kind of fundraiser. I thought that was good, because they were taking it into their own hands, they are showing how important health is. That they are not just going to wait for the budget to give them money.*

Notably, she didn't indicate any class discussion or structured instructional support regarding YPAR activities read on the Facebook group, and how they could relate to their own class project. Thus, she didn't identify the applicability or transfer of other group YPAR activities to her own class YPAR project. Yet, she did indicate a general sense of motivation to continue her class YPAR project, as a result of viewing the work of others. Although, specific YPAR activities may not have transferred among groups, a degree of motivation to continue to move forward in her YPAR project appeared to occur.

Lastly, Interviewee 258 identified enjoying the unique trajectories of the different YPAR groups, and noted that having too much overlap in content area would have produced repetition. She enjoyed learning about other groups' issues and problems, and described the Facebook group as a platform to support others.

> *I actually like the fact that there were different topics. Because an overlap, two it would be kind of boring. Not boring, just something else to read about besides our own project. And also three, if everyone did the same project, not that everyone would copy each other but it would be the same redundant ideas. And I guess you wouldn't give that much advice you know, as if it was different. I actually really liked looking at the depression posts, and the health posts just to see how I can help them.*

Site B.

Interviewee 428: Female, Latina, High Civic Participation, and High Degree Centrality within the Facebook Group

Interview 428 is an outgoing, expressive, friendly, and reflective student. She was a junior, and active in school sports. She expressed a lot of school pride, tended to make an overall positive impression on her peers, and teachers. She identified having a lot of positive support from school staff (i.e. school counselors, and teachers) to stay in school, and pursue a higher education. Observing her in class, she was active in the YPAR component of the class project. She was particularly proud of what her class had accomplished (i.e. their ability to raise money to support their school health teacher) without the support of the school administration.

Furthermore, she took great interest in data collection. For instance, she spearheaded conducting video interviews with the student body after school. These interviews focused on asking students to identify if statements were "sexual health myths or actual health facts". She indicated surprise and concern with the results yielded from the interviews, which helped steer

the action component of the project (i.e. raising funds to improve sexual health curriculum). "*It was crazy that like, they didn't know- like, those simple- facts. Like, you can't wear like two condoms, that it's not safe, even though people say it's safer. So the, kind of those things they- had the wrong answers to."* Additionally, she hoped to expand the research project next year, developing a survey to capture the study body's perceptions of their health curriculum. "*I'm looking forward to seeing like, how- they feel about health class. I would like to do like a survey- to see if they like it, how they feel, if they wish they- had more resources and stuff."*

In the context of the Facebook group, Interviewee 428 enjoyed participating on the Facebook group, as well as reading other students' ideas. She articulated enjoying seeing students within her own class post ideas, or pictures they took within the school. These pictures often made her pause, think, and critically reflect on particular aspects of her school environment.

> *Student: I loved the post of the dead bird that has been here for like 3 years. When I came in 8th grade, I was practicing soccer, and I would see it. And be like 'is that a bird'? I would always get sad. First, I thought it was stuck and alive, but now I know it is dead.*
>
> *Interviewer: What about that post caught your attention?*
>
> *Student: I just would have never thought to post something like that. But, he's right it's gross, they teach us about health. But, how can they, when we are learning in a place like this?*

Furthermore, she noted that she tended to avoid, and or censor her communication with students from other schools out of fear that they may misinterpret her comments as giving them a specific attitude. "*I get sensitive really easy. So, I'm scared to like post what I really want to say, because I don't want the other person to take it the wrong way. When you write something-you can't see*

how they're saying it. If I say- write something, maybe I won't notice that I'm giving attitude." She noted that she wasn't fearful or hesitant when communicating with classmates, with whom she felt comfortable, and was less likely to monitor her online comments.

Student: I was just like "EWW!" Like I think I said like, "Oh My God-…that's nasty!"

Interviewer: So you kind of shared your own personal reaction.

Student: Yeah, but I feel comfortable because I know it was somebody from SCHOOL B.

Interviewer: So, then did it matter who posted it?

Student: I think it mattered that that it was somebody from SCHOOL B.

Interviewer: Okay.

Student: Because, if I would've seen that from another school I would just kept it to myself.

However, Interviewee 428 did reach out to other students from different schools when she had a specific piece of information to share, which she thought could expand their thinking on a particular social issue. Furthermore, she appeared vocal, challenging perceptions of School B as a "problem school". "*They said [School A], like, 'oh its seems like they're (School A Counselors) are at lunch for the whole day'. So, I commented on that. And I wrote how SCHOOL B counselors are not like that. And I've had the same counselor for three years, she knows most of us by our, like our names."* In particular, she noted her surprise that School A suffered from a lack of available school counselors, as their school ranked the highest in the district academically. "*It's interesting- to see how SCHOOL A is like the best school. And it's funny to know like, that they don't have the counselors, like SCHOOL B's. A lot of us have, like the relation with our counselors. Even if they're like, the-…the kids that get in trouble. I know that they're still close with the counselor."* Students from School A and C did not visibly initiate the

narrative of School B being a "problem school" within the Facebook group, this narrative mostly came from students attending School B (e.g. for example taking pictures of the dirty bathrooms). Yet at the same time Interviewee 428 felt a need to defend her school, and highlight it's assets when communicating with other schools.

Interviewee 428 noted that when she did reach out to talk to students from a different school, the interaction was based on the content and relevance of their posts, rather then students' particular demographics. *"Sometimes I don't even look at what they are like, - cause if I'm, I'm on my phone –- like the pictures (profile picture) are like one dot."* Interviewee 428 indicated being less aware of the actual demographics of students who posted comments from other schools on the Facebook, and was more engaged in the content of the post, particularly if she felt she had insights to add to the conversation.

Interviewee 428 also articulated the importance of utilizing social media within the Facebook group. She expressed enjoyment in viewing pictures posted by other students. In particular, she enjoyed the creative posts from School C focused on depression, and wondered why this was such an issue in their particular school. *"I mean what's going on there? Is it the school?"* She also noted that students were much more receptive to her own posts when she utilized social media. "*Yeah, I like seeing pictures. I feel weird, when I write like, an essay. I feel like, nobody's going to read it."*

While, she didn't identify specific YPAR practices she learned about from the Facebook group, and employed in her own class during the current semester, Interviewee 428 did express an interest in developing her own survey the following year (as described in detail above). This interest was partially motivated by the work, and success School A had with leveraging their survey results to build buy-in with the school administration.

Student: I was thinking about their survey. I was just thinking about the results of a survey people take them seriously, they can be very helpful.

Interviewer: Yeah. So did it help to see their example one?

Student: Yeah.

Notably, Interviewee 428 hoped to replicate this success in School B, and saw surveys as a critical tool in leveraging buy-in from school staff, and the administration. This particular instance might highlight that longer use of the online platform (i.e. a full year, or two), has the potential to have greater use and facilitate dissemination across geographic locations (i.e. classrooms) eventually. Yet this particular motivation appeared self-directed, as Interviewee 428 noted that there was limited class discussion, or instructional support regarding what students were reading on the Facebook group, and how this might actually transfer to their own YPAR project.

Site C

Interviewee 176: Male, Latino/Hispanic, Low Civic Participation, and Low Degree Centrality

Interviewee 176 is a quiet, reflective, and articulate student. He has a few key friends within the class. Yet, his peers tend to be outspoken, active in the class YPAR project, and on the Facebook group. While Interviewee 176 tends to be more quiet and reserved on his own, he was responsive to the teacher's request, and took on key tasks within the group to move their YPAR project along. For instance, I have observed him co-lead with several students a room full of 50 college students in an activity to explore the values of youth voice in decision-making. During his presentation he came off as loud, clear, confident, and persuasive. When I asked about the experience, he simply laughed and said, *"I mean TEACHER from SCHOOL C told me to do it, but it was exciting"*.

Furthermore, when I went to conduct the interview, he was making announcements in high school classrooms for the confession board. "*We go to classes, and like, we asked them to do like confessions, say something they overcame, or something they struggled with. And it was just so, we could put it like in the display case, and people wouldn't feel alone. Like there like, 'oh that person has the same problem as me'".* Although, quiet and reflective, Interviewee 176, didn't have concerns voicing to me the challenges he observed with the Facebook group, and why he often intentionally chose not to participate.

In the context of the Facebook group, Interview 176 described the overall experience as awkward. In particular, he felt anxious at the idea of reaching out to students from different schools on the Facebook group. He feared that the interaction might cause tension, or suspicion from other students. *"It goes back to the awkwardness. I thought they would be like 'oh you didn't even go to my school, and your liking this?'''* Unique to Interviewee 176's experience (compared to other interviewees) this tension in communicating with students from different schools also hindered him from communicating with his own classmates on the Facebook group. He noted that he didn't chat with his classmates on the Facebook group either. Which he identified, as a result of partially not being close to all of his classmates. Thus, if he didn't interact with them normally, interacting with them on the Facebook group, he predicted would also be anxiety provoking and cause social discomfort.

Interviewer: So you didn't tend to communicate with your classmates either on the Facebook group?

Student: Yeah.

Interviewer: Is there a reason why you didn't communicate on the group?

Student: Um…probably, because I don't really talk to all of them, so it's like awkward.

Lastly, with his close peers, he reasoned that he didn't to chat with them on the Facebook group, as he could ask them directly. "*I mean, I could just tell them right there".* Although, Interview 176 often didn't reach out to other students both from different schools, and within his own class, he appeared to have a pre-determined mindset that he wasn't going to get a response. *"I guess when you like put things down, you didn't really expect to get an answer back from the other students."* These low expectations appeared to hinder his desire to even try to engage in communication efforts.

Although, Interviewee 176's communication was limited on the Facebook group, he did follow, and observe what others posted. He particularly, enjoyed the posts from School B, regarding the poor sanitary state of their bathrooms, as this was struggle he could personally relate to within his own school.

Student: You know the whole, the bathroom thing.

Interviewer: Oh, yeah.

Student: I was like 'oh wow' I thought, we were the only school that bathrooms were that disgusting.

Thus, Interview 176 was engaged and aware of what was occurring on the Facebook group, and applying it to his own class environment. Yet, he chose not to communicate these ideas or thoughts with anyone.

When Interviewee 176 did comment on the Facebook group, it was in regard to posts that actively solicited feedback, and alternative opinions. This particular tactic Interview 176 felt comfortable with (although he didn't use it himself), and recommended it be used in future projects. "*They should literally, ask the school itself. Not just put it up there, like be specific with who you are asking."* It appeared having an acceptable opening to talk with other students'

enhanced Interviewee 176's comfort in communicating with students he didn't know personally. He noted the one post he responded to, was not based on the profile of the student (i.e. race, gender), rather they had posed a question to the group (specifically his class), and no one had responded, so he had felt obligated to chime in with his opinion.

Interviewee 176 also enjoyed the use of social media on the Facebook group, and suggested it be further used in future projects to enhance readability and bolster student engagement. Online photos and videos caught his attention (as in the case of School B posting pictures, and videos of their bathrooms), and tended to make him reflect upon his own school environment. "*It's nice because you had a visual representation, of what was going on there, cause I didn't want to read all of it."*

Notably, interviewee 176 articulated a clear disconnect in conducting his class YPAR project, and participating on the Facebook platform. For instance, he didn't indicate learning or utilizing any of the YPAR practices from the Facebook group in his own class project. Nor did he list any YPAR practices that the other groups used that he found interesting or applicable to his own work. In sum, he found the topics to be too diverse and at times un-relatable. "*It wasn't really relating to what we were doing."* Furthermore, he indicated that time on the Facebook group began to conflict with his class YPAR project. He noted the group often made the choice to focus on their own project and future steps they needed to take, then spending class time discussing, or participating on the Facebook group. *"We just had to chose, and were more focused on finishing our projects and stuff, that being on the Facebook group."* This might have been due to the fact that school C's first social action strategy the compliment cards, backfired. Students whom were popular received compliments, but those who were more socially removed tended not to receive compliments, thus furthering social divides and potential feelings of

isolation. The class then had to quickly regroup, and plan an alternative action plan. As a result of this hustle, students may have felt they had to prioritize on the groundwork, rather than engage on the Facebook group. Interestingly, neither they nor the instructor thought to solicit the input of students from other classes regarding potential ideas.

Interviewee 176 did note that participating on the Facebook group, in which everyone was engaged in the same topic, might have facilitated further conversation, and use of the online platform. He felt having the same topic would facilitate more conversation, and would be easier for students to directly use and apply ideas from one another.

Interviewer: So do you think, if they, if you had all been doing the same topic it would have been more helpful?

Student: Yes.

Interviewer: And, why do you think that would be the case?

Student: Cause then we're all really kind of working on a similar things. We all come together and like talk about it. It would be interesting to see how other people were handling depression.

Thus, Interviewee 176 appeared to express interest, and support for a project that had greater convergence in focus and social issues.

APPENDIX J

Online Student Survey

Name: _____

Date: _____

Who should be filling out this survey? It is important that you should ONLY be taking this survey if you, and your parents signed and turned in permission forms giving permission for you to participate in the online survey component of the study.

Please indicate:

- ☐ Yes, my parents gave permission by signing the permission form regarding my participation in completing the online survey.
- ☐ No, my parents did not give permission regarding my participation in completing the online survey.
- ☐ I am 18 years old and do not require parental permission to participate.

If yes:

- ☐ Yes, I gave permission by signing the assent form regarding my participation in completing the online survey.
- ☐ No, I did not give permission by signing the assent form regarding my participation in completing the online survey.

If yes to both answers then proceed.

Instructions:

Hello, there! Please fill out this brief survey. This survey gives us important feedback on what particular activities (i.e. creating surveys, conducting interviews) you have participated in your PEER RESOURCES classroom. For the questions below, reflect back on your experience in your PEER RESOURCE classroom. Please click the circles that best reflect your experiences participating in you PEER RESOURCES classroom in the **last month.**

Remember this survey is voluntary. You do not have to complete it, and you can refuse to answer any question. You can also stop the survey at any point in time, and request that your responses be destroyed. This survey is confidential. Meaning only the Michigan State University research team will know how you responded to the questions. Your name will never be linked to your answers in any reports.

Thank you for your time and participation!

Have you participated in any of these activities within the last **month**? For each item, please click "Yes or No".	Yes or No?	If YES, how many times have you engaged in this particular activity in the **last month?**	I heard about this activity from….(Please mark all that apply)			
			Facebook Group	PEER RESOURCE Teacher	PEER RESOURCE Classmate	I haven't heard of this activity
1. Identified a class issue that personally impacts you. For example: Bullying, cafeteria food, etc.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
2. Brainstormed the root causes of your class issue. In other words, the underlying reason for why the problem is occurring.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
3. Discussed how widely and deeply felt your class issue is? For example: How many and how strongly are students being impacted?	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
4. Identified whether your class issue is achievable. In other words, an issue that is possible or winnable.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
5. Other activities, in which you have explored your class issue. If yes, please give details below: _____.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	NA
6. Created a survey. In other words writing and designing your own survey.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○

Have you participated in any of these activities within the last **month**? For each item, please click "Yes or No".	Yes or No?	If YES, how many times have you engaged in this particular activity in the **last month?**	I heard about this activity from….(Please mark all that apply)			
			Facebook Group	PEER RESOURCE Teacher	PEER RESOURCE Classmate	I haven't heard of this activity
7. Conducted interviews, one-on-one conversations.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
8. Led focus groups, group interviews.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
9. Took field notes, written observations.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
10. Other form of data collection. For example: Poetry, Sleep Diaries, etc. If yes, please give details below: _____.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	NA
11. Gathered and read through existing data. For example, findings from past school reports, websites, articles, and other reading materials.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
12. Reviewed collected data and developed a plan for identifying major findings. For example, deciding to count the number of responses to key questions. Data can include surveys, interviews, observations, photos, or	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○

Have you participated in any of these activities within the last **month**? For each item, please click "Yes or No".	Yes or No?	If YES, how many times have you engaged in this particular activity in the **last month?**	I heard about this activity from….(Please mark all that apply)			
			Facebook Group	PEER RESOURCE Teacher	PEER RESOURCE Classmate	I haven't heard of this activity
focus groups, etc.						
13. Carried out plan for identifying major findings from the data. For Example: Tallying the number of responses to survey questions. Data can include surveys, interviews, observations, photos, or focus groups, etc.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
14. Other forms of data analysis. In other words, reviewing the data and identifying the most common responses themes. If yes, please give details below: _____.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	NA
15. Determined action plan based on the data. In other words, decide future steps based on main findings.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
16. Shared findings with the school. This can include the principal, teacher, or other students.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
17. Made recommendations for changes to the school. This can include the principal, teacher, or	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○

Have you participated in any of these activities within the last **month**? For each item, please click "Yes or No".	Yes or No?	If YES, how many times have you engaged in this particular activity in the **last month?**	I heard about this activity from….(Please mark all that apply)			
			Facebook Group	PEER RESOURCE Teacher	PEER RESOURCE Classmate	I haven't heard of this activity
other students.						
18. Organized a group of students to support a new change or policy. For example: Got students to sign a petition for more after school programs.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
19. Started a new policy or group within the school. For example: Conflict resolution workshops for bullying.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	○
20. Other action plan. If yes, please give details below: _____.	○ Yes ○ No	_____ (# Times this Month)	○	○	○	NA

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