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# **Profiles of Youth Citizenship: A Cluster Analysis of Ethical Factors, Demographics, and Problem-Solving Disposition**

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*Youth have the capacity to drive positive change in their communities through active and engaged citizenship (AEC). Teen leadership programs provide youth with opportunities to develop the skills necessary to participate as partners in community problem-solving efforts. Situated in relational developmental systems metatheory, this study examined how cluster membership based upon demographic characteristics, ethical factors, and problem-solving disposition impacted AEC. The findings indicated significant differences between clusters for AEC, civic duty, and civic skills. These differences were predominately observed through membership in long-term or short-term leadership programs, gender, enrollment in honors/AP courses, ethical views, and problem-solving disposition. Youth leadership practitioners should consider avenues for infusing problem-solving and character development in gender inclusive program curricula to increase the likelihood for contributing.*

*Keywords:* citizenship, ethical factors, problem solving, leadership

## **Introduction**

From an interactional lens, a community is a dynamic, changing environment built on the actions of its members rather than a stagnant, geographically bound area (Barnett & Brennan, 2006). From this perspective, individuals, including youth, influence their communities, whether intentionally or unintentionally (Lerner et al., 2005). However, community development initiatives rarely build on the strengths of youth or allow youth participation to contribute to community viability. Even so, youth have the capacity to develop healthier communities with longevity (Checkoway & Gutierrez, 2006); society, their community, and the individual are all positively impacted when youth are actively engaged (Zaff et al., 2010). Increasing youth capacity for active and engaged citizenship (AEC) benefits youth participants, their communities, and greater society.

Good citizenship is difficult to define and measure, but active civic participation, moral views, and political activities can provide evidence of individual citizenship (Taylor & Marri, 2012). Civic participation can be divided into three domains: voting behavior, helping in the community, and making one's voice heard (Haste & Hogan, 2006). Partaking in all three domains is beneficial for both the individual and their community. When considering youth's civic participation and citizenship, individuals often view these concepts in two distinct ways (Bell, 2005). The first way involves youth's need to develop skills to become future citizens. The second includes examining youth's views and insights on their current roles as citizens with recent research supporting youth's role as active community members who drive change (Harris, 2015; Mortensen et al., 2014). Mortensen et al. (2014) argued that youth have the awareness and desire needed to create meaningful change within their communities, while Harris (2015) supports youth's role in collaborative community problem solving. Both studies provide support for the capabilities of youth in making meaningful contributions, but they must possess the skills and motives necessary to be successful in these endeavors.

4-H is one of the longest-running youth organizations in the United States that aims to assist youth in developing these skills for positive contributions to their communities (National 4-H Council, 2017). To do so, 4-H employs the positive youth development (PYD) framework. According to PYD, youth can contribute when they are "thriving" (Larson, 2000). Youth thrive when they have competence, confidence, connection, character, and caring (Zarrett & Lerner, 2008), which reduces negative, risky behaviors (Shek & Sun, 2015). These negative behaviors are reduced because flourishing youth often engage in contributions to their families, communities, self, and overall society (Lerner et al., 2003). With this in mind, youth engaged in programs and settings that promote PYD develop the necessary skills to become contributing citizens.

There are several elements required to practice PYD and contribution: positive relationship with caring adults, a safe and inclusive environment, engagement in learning, opportunity for mastery, opportunity to see oneself as an active participant in the future, opportunity for self-determination, and opportunity to value and practice service for others (4-H National Headquarters, 2011). Leadership is often related to contribution and citizenship within 4-H programs, with leadership efforts including club-based, county-based, and statewide leadership-training programs and positions. However, youth leadership initiatives are not all created alike and often have varying outcomes. This phenomenon is a result of the development and implementation of programs occurring prior to a solid basis of research and theory, with broad views of what constitutes youth leadership as a prominent issue in the field (Conner & Strobel, 2007; Klau, 2006). With little research on what specific leadership-based initiatives result in increased AEC, this study sought to gain insight into profiles of AEC in youth participating in 4-H teen leadership programming.

## **Purpose & Objectives**

To analyze how 4-H leadership programs impact the development of active and engaged citizens, one must consider the bidirectional relationship between individuals and context. Relational developmental systems (RDS) metatheory posits that adaptive developmental regulations are mutually influential relations between person and context and impact the development of active and engaged citizens (Zaff et al., 2010). AEC provides a model for examining behavioral, cognitive, and socioemotional constructs associated with youth citizenship development (Zaff et al., 2010). Lerner et al. (2014) emphasize how ecological assets, strengths of adolescents, PYD, and risk/problem behaviors all impact AEC. Problem-solving disposition is not specifically examined through this model. Positive problem-solving disposition may provide insight into youth's preparedness to engage in collaborative community problem solving based on the relationship between perceptions of competence and self-determination. When youth are able to accomplish tasks within their realm of ability, they experience heightened enjoyment, competence, and self-determination (Weiss, 2011). Therefore, to establish a model for developing active and engaged citizens prepared to act as change agents within their community, we must explore youth profiles of citizenship to understand the makeup of young active and engaged citizens.

The purpose of this study was to use person-centered analysis to develop youth profiles of citizenship. We assessed statistical significance between clusters and AEC. Are there youth profiles of AEC based on ethical views, demographics, and problem-solving dispositions for youth participating in a 4-H teen leadership program? To that end, this study was conducted to

1. Describe AEC, ethical views, demographic characteristics, and problem-solving disposition;
2. Identify clusters of participants based on ethical views, demographic characteristics, and problem-solving disposition; and
3. Examine relationships between AEC and clusters based on ethical views, demographic variables, and problem-solving disposition.

## **Theoretical Framework**

From a relational developmental systems (RDS) viewpoint, youth are regarded from a strength-based perspective as resources to be developed (Geldhof et al., 2013). Examining trajectories toward AEC enables a greater understanding of the mutually influential, person-context relations involved within RDS (Zaff et al., 2011). Therefore, the theoretical foundation for this study is centered on RDS metatheory and the role of sociocultural theory and the theory of planned behavior.

## **Relational Developmental Systems**

Within developmental science, understanding how humans thrive through mutually influential relations between individual contributions, positive community engagement, and community organizations is a focal area of work (Lerner et al., 2014). RDS metatheory provides a basis for examining these phenomena from “a life-span approach to the scientific study of systematic intraindividual changes—from conception to the end of life—of an organism’s behavior, and of the systems and processes involved in those changes and that behavior” (Overton, 2015, p. 47). Within RDS, a reciprocal bi-directional or circular relationship exists between the individual and their context, which incorporates both inter- and intra-individual change (Overton, 2013). Plasticity is a hallmark of this metatheory and encompasses the capacity for development to be systematic and continuous rather than random (Lerner & Overton, 2008). The organism is inherently active, self-creating, self-organizing, and self-regulating in nature within a plastic, nonlinear, complex adaptive system (Overton, 2015). The organism’s actions function coactively with the physical and sociocultural environment it inhabits.

Within systematically integrated human development, when the bi-directional relations are mutually beneficial, a foundation for adaption throughout the lifespan arises through levels of organization (Lerner et al., 2014). Adaption within RDS is how the person responds to changing contexts (Overton, 2013). RDS examines developmental processes as non-ergodic and does not assume homogeneity across samples or stationarity across time (Lerner et al., 2014). With this approach, individual strengths are aligned with environmental resources for positive growth, and youth development may be optimized (Geldhof et al., 2013), resulting in applied empirical work for positive human development and social justice (Lerner & Overton, 2008). Furthering expansive holistic yields of inclusive inter- and intra-individual patterns for responding to “what” questions within programmatic research (Lerner et al., 2014), such as what context, for what youth, at what developmental period, results in what features of community problem-solving?

Traditional developmental science was derived from the principles of the Cartesian-split mechanism paradigm, which argued that mind and body were separate in existence (Overton, 2013). With this system, unidirectional linearity is applied through explanations of cause-effect sequences (Overton & Reese, 1973). Within a relationism worldview and an RDS paradigm, Cartesian-split metatheory is omitted through an epistemology, which rejects a “nothing but” splitting view and promotes inclusivity through holism. With holism, complexity is organized in a system of parts that are unable to be context-free (Overton, 2013). Therefore, with inquiry, it is essential to consider the following principles: identity of opposites, opposites of identity, and synthesis of wholes (Overton, 2013).

Further, RDS integrates six necessary defining features: (1) organization of processes, (2) embodiment, (3) order and sequence, (4) direction, (5) epigenesis and emergence, and (6) relative permanence and irreversibility (Overton, 2015). In RDS, an individual organizes and

regulates itself through coactions with biological, sociocultural, and physical environmental subsystems (Overton, 2015). Embodiment involves one's body as a lived experience, which interacts with a world of sociocultural and physical objects. Order and sequence are contingent in nature but based on a universal sequence within the complex living system (Overton, 2015). Directionality suggests orientation toward an end state, which implies unidirectionality. However, there are multiple action paths through a normative sequence (Overton, 2015). The system is situated within a specific context through epigenesis, with emerging system novelty for an increase in complexity. Finally, transformational change within the system is relatively permanent and irreversible (Overton, 2015).

RDS metatheory transposes the independence of each individual's developmental trajectory from any other human. All human beings embody actions, which are characteristics of their complex adaptive system. Human actions are viewed as intentional activities, with intentionality either being conscious or self-conscious, not requiring a level of knowing (Overton, 2013). Therefore, all embodied actions are a product of the person, biology, and culture. Actions are impacted by adaptive developmental regulations, which are best described as experiences or structures in a youth's relationship between themselves and their context (Geldhof et al., 2013). Adaptive developmental regulations may emerge and/or advance in an individual and their environment to increase the likelihood of positive development, such as family structure, social groups, and community. In the model for AEC of youth, "adaptive developmental regulations lead to positive youth development and, within the context of the broader ecology of human development, in turn, lead to positive civic engagement and reduced risk and problem behaviors" (Lerner et al., 2014, p. 73). This developmental trajectory presents an example of a predicted developmental process, which incorporates adaptive developmental regulations to enhance the probability of contribution. Within RDS, probabilities can be assessed through normative sequences with multiple action paths and respect to biological, sociocultural, and physical environmental subsystems.

### **Sociocultural Theory**

At the basis of RDS metatheory are the mutually influential relationships between biology, person, and culture (Overton, 2015). Further, Overton (2013) posits:

In the area of sociocultural development, there appears to be a clear trend away from positions that identify individual development and culture as separate and distinct, if interacting, entities, and towards the position that recognizes their coconstruction, codetermination and codevelopment. (p. 23)

RDS concepts are tools for social justice established as theory-predicted and evidence-based policies and programs, which drive positive change and development for all youth (Lerner & Overton, 2008). Sociocultural theory provides a basis for understanding the impact that culture and environment have on human development.

Sociocultural theory is derived from social cognitive theory, which simplistically represents the social learning system as one acquires patterns of actions and behaviors through experiences and observations (Bandura, 1971). Social cognitive theory is centered around the concept of behavior as dynamic and reliant on personal and environmental factors, which simultaneously influence one another (Holtzapple et al., 2011). Within social cognitive theory, self-regulation and self-influence are determined by the self-monitoring of effects, judgment of contextual circumstances, and affective self-reaction (Bandura, 1991). At the core of social cognitive theory, all individuals essentially partake in symbolizing, forethought, vicarious learning, self-regulation, and self-reflection (Stajkovic & Luthans, 2003). Personal agency is developed through intentional actions, also called predicted or future actions (Bandura, 2001).

Vygotsky's (1978) sociocultural theory posits that individuals derive meaning from their experiences through social mediation, which is situated within culture and history. Social interaction through one's developmental history influences symbolism and culture (Mahn, 1999). Three central elements of sociocultural theory are social sources of individual development, semiotic mediation in development, and genetic analysis (John-Steiner & Mahn, 1996), meaning, as one grows, learning occurs based on genetics, symbols, and social interactions (Mercer & Howe, 2012). This results in the development of one's cultural associations.

One's culture is collective, emotional, historical, symbolic, dynamic, and fuzzy. Cultures are collective because they are not created by an individual alone but rather require a shared perspective. Cultures become emotional when anxieties are managed by one's rationale within their background (Alfred, 2002). Practical and technical sides of human interaction are accentuated through the symbolism of culture (Alfred, 2002). Views on culture are embedded in historical premises. Therefore, individuals are unable to disassociate from their histories. These historical perspectives are invasive but not static, and they lead to the dynamic view of culture. Finally, cultures are viewed as fuzzy because "cultures are not monolithic, single sets of ideas, but are instead pluralistic and incorporate contradictions, ambiguities, paradoxes, and just plain confusion" (Alfred, 2002, p. 6). Therefore, partaking in reflection processes enables individuals to understand how they interpret who they are in association to others.

As active and engaged citizens, personal culture and history of social experiences have an impact on developmental trajectories. Youth are not homogeneous citizens; they all have different lived experiences of citizenship (Bell, 2005). Parental and community views of civic participation and one's self-efficacy relating to participation in problem-solving opportunities impact youth in different ways but should be considered. For example, Taylor and Marri (2012) found that identity, family, movement, school curricula, and community engagement all impacted immigrant youth's conceptualization of citizenship. These factors varied in their impact on developmental pathways toward engaged citizens (Taylor & Marri, 2012). Additionally, Banks (2017) proposed the concept of "failed citizenship," which can occur because of an individual feeling structurally excluded or not aligned with social values and norms in their community.

Failed citizenship can lead to a focus on one's primary needs rather than shared goals in their community. This is important to consider when envisioning an optimized developmental process to contribute to active and engaged young citizens.

### **Theory of Planned Behavior**

Derived from Bandura's (1971) social cognitive theory, the theory of planned behavior (TPB) provides a basis for understanding how individuals decide to engage in specific behaviors (Fishbein & Ajzen, 2010). TPB involves consideration for how background factors impact beliefs, which ultimately drive the formation of one's attitudes, perceived norms, and perceived behavioral control. These all ultimately impact intention, which leads to behavior (Fishbein & Ajzen, 2010).

Behavioral, normative, and control beliefs are the three types of beliefs involved with TPB. Behavioral beliefs are based on one's predictions of the consequences or benefits they may reap from performing the behavior. Behavioral beliefs impact one's attitude toward personally performing the behavior based on their concerns for positive or negative consequences (Fishbein & Ajzen, 2010). Normative beliefs are based on one's assessment of whether others approve or disapprove of the behavior. Normative beliefs produce perceived norms, which are social pressures and conceived social responses from partaking in the behavior (Fishbein & Ajzen, 2010). Control beliefs are formed around environmental and personal factors aiding or impeding one's ability to carry out the behavior (Fishbein & Ajzen, 2010). Control beliefs result in one's behavioral control and sense of self-efficacy (Fishbein & Ajzen, 2010).

Personal attitudes, perceived norms, and perceived behavioral control guide intentions and behavior (Fishbein & Ajzen, 2010). Behavioral intention, within TPB, is one's readiness to perform the behavior (Fishbein & Ajzen, 2010). Behavioral intentions are the best predictors of behavior, but actual control based on skills, abilities, and environmental factors must also be considered. The greater the attitudes, perceived norms, and perceived behavioral control, the higher the intentions are and the greater the likelihood they will partake in the behavior. However, background factors also contribute to beliefs and overall behavioral outcomes. Fishbein and Ajzen (2010) postulate:

A multitude of variables could potentially influence the beliefs people hold: age, gender, ethnicity, socioeconomic status, education, nationality, religious affiliation, personality, mood, emotion, general attitudes and values, intelligence, group membership, past experiences, exposure to values, intelligence, group membership, past experiences, exposure to information, social support, and coping skills. (p. 24)

These background factors are acknowledged but difficult to attribute without consideration to other theories. RDS metatheory and sociocultural theory provide a basis for consideration and examination.



Consistent with RDS metatheory, TPB provides a framework to understand how humans engage in actions regarding background factors. Fishbein and Ajzen (2010) agree that all individuals have different explanations and paths for how their background factors impact their intentions and behaviors. However, TPB suggests background factors are difficult to attribute to responses and must be complemented with others to examine their impact on TPB (Fishbein & Azjen, 2010). Connecting TPB with sociocultural theory under RDS metatheory provides a basis for examining normative sequences within youth behavioral development. The framework creates a basis for examining the impact of background factors and adaptive developmental regulations on developmental trajectories for active and engaged young citizens.

### **Conceptual Framework**

Demographics, ethical views, and problem-solving disposition from RDS metatheory can be utilized to develop youth profiles for AEC. AEC is often operationalized as “someone who has a sense of civic duty, feeling of social connection to their community, confidence in their abilities to effect change, as well as someone who engages in civic behaviors” (Zaff et al., 2010, p. 737). In AEC, civic action, civic skills, social connection, and duty serve as constructs. This perspective views active and engaged citizens as those who are more than just “dutiful” citizens who partake in activities such as voting, obeying laws, paying taxes, and upholding community standards (Mihailidis & Thevenin, 2013). Rather, active and engaged citizens meaningfully contribute to their communities.

However, according to PYD, for a youth to be an active and engaged citizen or contributing member, they must be thriving (Larson, 2000). Thriving youth possess the five “Cs” of competence, confidence, connection, character, and caring (Lerner et al., 2003). Youth development programs that utilize PYD as a foundation promote youth’s capacity for contributing to their communities. The conceptual framework for this study draws upon PYD as a foundation for developing thriving youth with the capacity for AEC.

### **Demographics Variables**

Because youth are a heterogenous group with a variety of personal and contextual experiences, they all contribute and view their contributions toward their communities differently (Bell, 2005; Mihailidis & Thevenin, 2013). To examine these personal and contextual experiences, one must examine youth profiles utilizing demographics such as activity participation, gender, race, and ethnicity. Certain demographic characteristics are considered protective factors. Protective factors are inputs that encourage prosocial behaviors and reduce the risk of youth partaking in antisocial behaviors (Biggar et al., 2016; Burton & Marshall, 2005). Individual, family, or community-based factors act as protective factors. However, these protective factors are contextually historical, social, and cultural (Crockett & Crouter, 1995). Therefore, examining demographics provides an avenue for developing profiles.

Involvement in extracurricular activities and youth organizations often serves as protective factors for a range of deviant behaviors and increases a sense of psychological well-being (Agans et al., 2014; Catalano et al., 2004; Feldman & Matjasko, 2005; Kahne et al., 2001). Zaff et al.'s (2010) model of AEC views the connection to community as a large contributor to one's affinity toward citizenship participation, deeming community activity participation an important factor when examining youth profiles based on environmental and contextual impacts.

### **Ethical Views**

Character strengths or ethical views have the capacity to impact a person's view of their ability to develop into active and engaged citizens (Hilliard et al., 2014). Character strengths from this point of view involve one's attitudes, beliefs, and values, which affect the view of their role within the community. Character strengths are derived from four distinct virtues: moral, civic, intellectual, and performance (Baehr, 2017; Shields, 2011). Individuals with moral virtues demonstrate compassion, kindness, and empathy for others through a drive to help their neighbors (Roberts & Wood, 2007). Civic virtues move past an individual aiding another in need and include a desire to impact society overall. Civic virtues often include tolerance, civility, and inclusion (Baehr, 2017). When a person desires to gain knowledge and truth related to civic endeavors, they have intellectual virtues such as curiosity and intellectual courage (Baehr, 2017). Finally, performance virtues can double as a moral, civic, or intellectual virtue as well as a virtue in and of itself (Baehr, 2017). Performance virtues are not motivated by the need of another individual or society as a whole but by a need to work on complex and challenging problems (Baehr, 2017). Virtues are known to impact citizenship, but little is known about how these virtues or ethical views interact with one another or with an individual's environment and context in order to impact AEC.

### **Problem-solving Disposition**

With an increasing number of wicked problems, it is essential to ensure teams are diverse to effectively provide viable solutions. Grint (2005) describes wicked problems as complex issues with no right or wrong answer but with various alternatives. Therefore, communities must ensure that all members are equally represented and engaged while providing various solutions to wicked problems. Youth are not often included in the problem-solving process but have the capacity to play a significant role in collaborative problem-solving teams (Harris, 2015). Brennan (2008) postulated that "youth bring new ideas, resources, enthusiasm, and serve as the basis for long-term sustainable community development efforts" (p. 56). By not including youth in the problem-solving process, communities are excluding valuable contributors.

However, it is essential to consider youth's preparedness and willingness to engage as equals in the problem-solving process. Teen leadership programs often consider problem-solving skills a priority for development (Brungardt, 1996). Problem-solving skills involve the ability to think creatively in order to create multiple solutions for social and cognitive problems (Zolkoski &

Bullock, 2012). These skills are essential and can be developed over time. For youth to fully participate as equal partners, they must also possess a positive disposition toward problem solving.

Problem-solving disposition is related to an individual's intention to engage in the behavior. In TPB, positive perceived norms, attitude toward the behavior, and perceived behavioral control influence intention to engage in a behavior (Fishbein & Ajzen, 2010). Intention—readiness and attitudes towards the behavior—is the best predictor of an individual's likelihood to engage in the behavior. Individuals with a higher problem-solving disposition or views, attitudes, and beliefs of their competencies to participate as problem solvers are more likely to participate in the problem-solving process.

Problem-solving disposition is related to performance virtues based on the desire to solve complex and challenging problems (Baehr, 2017). Examining problem-solving disposition could provide greater insight into how youth engage with their communities by understanding their attitudes, views, and beliefs on their problem-solving abilities. Since problem solving is a part of everyday life (Kirton, 2011) and youth are continually developing their own identities, their views on their own role and capacity for problem solving could provide a great deal of insight into an individual's likelihood to participate as an active and engaged citizen. Further, examining problem-solving disposition in combination with demographic characteristics and ethical views to develop youth profiles could provide a great deal of insight into youth development and their engagement in citizenship activities.

## **Methods**

This study examined how ethical views, demographics, and problem-solving disposition impact developmental trajectories for AEC through a person-centered approach. A person-centered approach can take multiple forms and is not an all-inclusive statistical approach. However, it does provide further consideration for intraindividual change and the diverse pathways of development. “The person-centered approach is grounded in the systems perspective of holistic organization of interactive views and is particularly suited for studying the complex organization of multiple characteristics within the individual” (Lau & Roeser, 2008, p. 497). A person-centered approach examines how clusters of variables impact behavioral responses (Bates, 2000). Person-centered approaches view the population as a heterogeneous group influenced by different variables to a diverse extent at various points in time (Laursen & Hoff, 2006).

## **Research Design**

The research design for this study was a non-experimental, ex post facto survey design (Ary et al., 2018). We chose the ex post facto survey design because participants had already engaged in leadership development opportunities, and the design allowed for surveying participants in a realistic setting. All respondents were participants in a 4-H teen leadership program or training in

the state of Virginia. There were variations in the treatment received based on length of time and program/training facilitator. Youth were enrolled in a year-round teen leadership club or a short-term leadership program. While an ex post facto design can serve as a limitation and reduce the demographic makeup of participants, a person-centered analysis helped to mitigate some of the sampling challenges. The primary focus of this research was to determine youth profiles of AEC utilizing a cluster analysis. Cluster analysis aims “to reduce noise in the data by reducing ‘within-group’ variability and maximizing ‘between-group’ variability” (Kusurkar et al., 2021, p. 247). A cluster analysis can be used with all kinds of sample sizes based on the number of cluster variables in relation to the sample size. This design allows for the identification of patterns based on the sample to be further explored through additional statistical analysis.

## **Sample**

All youth, ages 13-19, participating in teen leadership programs run by Virginia Cooperative Extension (VCE) served as the population for this study. In Virginia, 4-H leadership programs vary, with some counties supporting year-round teen leadership clubs and others instituting short-term trainings. At the state level, opportunities include positions in the state 4-H cabinet with year-round trainings and short-term initiatives, such as state congress and the 4-H Day at the capital.

We directly administered the instruments face-to-face on scheduled dates and times at club meetings and weekend-long trainings. The VCE 4-H state extension specialist for 4-H youth development identified 14 counties with strong, year-round teen leadership programs. We contacted each county extension agent to recruit participants and to schedule a time for data collection. Out of the 14 counties, we collected data from 11 counties. From the 11 counties, there were 275 potential participants, with 199 completing the survey for a response rate of 72.36%. We also contacted 14 additional extension agents to recruit counties with upcoming camp-counselor trainings, which incorporated teen leadership training. From the 14 additional counties, we scheduled collection dates with nine counties. From the nine counties, there were 95 potential participants, with 60 responding for a response rate of 63.16%. From both groups, there was an overall response rate of 70%. The county agents disseminated Institutional Review Board (IRB) guardian consent, youth assent forms, and recruitment materials to youth participants a week prior to data collection. Participants without guardian consent were often willing to participate but unable to do so based on ethical considerations and IRB requirements to obtain consent from guardians, which reduced response rates. The survey took approximately 30 minutes for each youth to complete. Obtaining guardian consent and county agents serving as gatekeepers for data collection were limitations in this study.

### ***Long-term Teen Leadership Program Demographics***

Youth from long-term teen leadership programs were primarily female ( $n = 133$ , 66.8%) and enrolled in honors/AP courses ( $n = 138$ , 69.3%). From the participants, 82.4% were white ( $n = 164$ ), 10.1% black ( $n = 20$ ), 2.5% multiracial ( $n = 5$ ), 2% Asian ( $n = 4$ ), 1% Native American ( $n = 2$ ), and 2% declined to state their race. The mean age of participants was 15.42 ( $SD = 1.35$ ).

### ***Short-term Teen Leadership Program Demographics***

Participants from short-term teen leadership programs were predominately female ( $n = 42$ , 71.7%). Of the youth, 76.7% were white ( $n = 46$ ), 15% black ( $n = 9$ ), 6.7% multiracial ( $n = 4$ ), and 1.7% Asian ( $n = 1$ ). The mean age of participants was 14.78 ( $SD = 1.26$ ), and 65% were enrolled in honors/AP courses ( $n = 39$ ).

### **Instrumentation**

To measure Active and Engaged Citizenship (AEC), we utilized a previously established instrument by Bobek et al. (2009) for usage with 6th-12th graders. The AEC scale examines behaviors and attitudes toward citizenship, including emotional, cognitive, and behavioral components of citizenship (Bobek et al., 2009). We adapted the 32-item AEC scale to incorporate social media as a means for outreach and advocacy by adding the words “social media” as a means for expressing your opinion publicly to questions 13 and 16. The instrument was not revalidated following these additions, which is a limitation in this study. Participants responded to 28 items on a 5-point Likert scale and 3 questions regarding amount of participation on a 6-point Likert scale (from 1 = *Never* to 6 = *Every day*). Scores on the scale could range from 32 to 163. The AEC scale has four constructs: civic duty ( $\alpha = .741$ ), civic skills ( $\alpha = .812$ ), neighborhood connection ( $\alpha = .766$ ), and civic participation ( $\alpha = .609$ ). The reliability for civic participation in this study was questionable, but a previous study by Bobek et al. (2009) reported an acceptable Cronbach alpha ( $\alpha = .73$ ). The overall AEC instrument yielded a Cronbach alpha of .834.

To examine ethical views, the researcher utilized the Report Card on the Ethics of American Youth (Josephson Institute of Ethics, 2012). The Josephson Institute of Ethics (2017) developed this instrument and collected data from over 20,000 students across the nation every two years since 1998. This questionnaire asks for opinions on nine ethical and unethical statements on a 4-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Agree*, 4 = *Strongly agree*, and 0 = *No opinion*). Participants also answered 14 items on the importance of material and character values on a 4-point Likert scale (1 = *Unimportant*, 2 = *Moderately important*, 3 = *Very important*, 4 = *Essential*, and 0 = *No opinion*) and 14 items on partaking in unethical behaviors in the last year on a 3-point Likert scale (1 = *Two or more times*, 2 = *Only once*, and 3 = *Never*). Scores had a potential range of 37 to 134. Dr. Rick Hesse validated the instrument to have an error margin of plus or minus less than one percent (Josephson Institute of Ethics, 2012).

We applied Dillman's Tailored Design Method (DTDM) to create demographic questions in order to examine additional demographics, including age, race, enrollment in honors/AP courses, and questions regarding activity participation (Dillman et al., 2014). Activity involvement included eight items regarding their participation in different activities on a 6-point Likert scale (from 1 = *Never* to 6 = *Every day*), and they were given six points for working eight or more hours a week. Scores on the activity scale could range from 9 to 54.

To collect data on problem-solving disposition, we adapted the EMI, Critical Thinking Disposition Assessment (Irani et al., 2007). Irani et al. (2007) developed the EMI to examine critical thinking disposition among college-aged students and adults. In the adaptation process, the reading level was confirmed to be under a 6th-grade reading level. We employed a pilot study to select questions related to problem-solving disposition. Following the pilot study, we selected 11 items to represent problem-solving disposition. We altered a few items to increase item discrimination. The 11-item problem-solving disposition scale yielded a Cronbach's alpha of .871.

### **Data Analysis**

We used descriptive statistics, frequencies ( $f$ ), percentages ( $P$ ), means ( $M$ ), and standard deviations ( $SD$ ) to describe demographic characteristics, ethical views, problem-solving disposition, and the AEC scale responses. We employed a two-step cluster analysis to determine the existence of clusters or subgroups of participants and mean variables by cluster regarding their responses to demographic questions, ethical views, and problem-solving disposition. The cluster analysis utilized eight clustering variables, which was appropriate based on recommendations for a sample size of at least  $2^m$  ( $m$  = number of clustering variables; Sarstedt & Mooi, 2011). A two-step cluster analysis was appropriate based on the variables being both categorical and continuous (Şchiopu, 2010). In the first step, an algorithm similar to k-means algorithm is conducted and followed by a modified hierarchical agglomerative clustering procedure to form homogeneous clusters (Sarstedt & Mooi, 2011). We then applied a one-way analysis of variance (ANOVA) to compare clusters on the AEC scale and subscales to report  $F$  statistics for significant differences between clusters. An alpha level of 0.05 was set a priori.

### **Results**

We conducted a two-step cluster analysis to determine profiles of youth participants based on gender, race, age, enrollment in honors/AP courses, ethical views, problem-solving disposition, activity involvement, and whether the individual participated in a long-term or short-term 4-H teen leadership club. The results generated five clusters (Table 1).

**Table 1. Descriptive Statistics of Variables from Two-step Cluster Analysis by Cluster (n = 259)**

Variable	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	(n = 82)	(n = 55)	(n = 45)	(n = 40)	(n = 37)
	f (%)	f (%)	f (%)	f (%)	f (%)
Treatment					
Long-term	82 (100.0)	0 (0.0)	45 (100.0)	35 (87.5)	37 (100.0)
Short-term	0 (0.0)	55 (100.0)	0 (0.0)	5 (12.5)	0 (0.0)
Gender					
Male	0 (0.0)	17 (30.9)	16 (35.6)	13 (32.5)	37 (100.0)
Female	82 (100.0)	38 (69.1)	29 (64.4)	27 (67.5)	0 (0.0)
Race/Ethnicity					
White	82 (100.0)	46 (83.6)	45 (100.0)	0 (0.0)	37 (100.0)
Asian	0 (0.0)	0 (0.0)	0 (0.0)	5 (12.5)	0 (0.0)
Black	0 (0.0)	9 (16.4)	0 (0.0)	20 (50.0)	0 (0.0)
Native Amer	0 (0.0)	0 (0.0)	0 (0.0)	2 (5.0)	0 (0.0)
Multiracial	0 (0.0)	0 (0.0)	0 (0.0)	9 (22.5)	0 (0.0)
PNTS	0 (0.0)	0 (0.0)	0 (0.0)	4 (10.0)	0 (0.0)
Honors/AP Course					
Yes	82 (100.0)	20 (36.4)	0 (0.0)	23 (57.5)	37 (100.0)
No	0 (0.0)	35 (63.6)	45 (100.0)	17 (42.5)	0 (0.0)
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Age	15.6 (1.2)	14.8 (1.3)	15.1 (1.5)	14.9 (2.6)	15.4 (1.5)
Ethical Views	119.3(17.1)	109.3(12.5)	108.0(21.9)	116.1(12.9)	117.1(14.6)
PS Disposition	43.7 (7.1)	43.9 (6.2)	42.0 (9.6)	43.3 (5.8)	43.9 (6.6)
Activities	23.0 (6.8)	22.5 (6.4)	20.7 (6.5)	21.3 (6.5)	21.9 (6.7)

*Note.* PNTS = Prefer not to state, PS = Problem solving, Activities = Activity Involvement

Cluster one ( $n = 82$ ) consisted of white females from long-term leadership programs who take honors/AP courses. Cluster one had the highest ethical views, slightly higher age means, and were involved in more activities when compared with the other clusters. Cluster two ( $n = 55$ ) was the youngest group and included a mixture of genders and individuals enrolled in honors/AP courses from short-term leadership programs. This cluster was predominately white ( $n = 43$ , 83.6%), with 16.4% being black ( $n = 9$ ). Cluster two had one of the higher problem-solving dispositions but lower ethical views. Cluster three ( $n = 45$ ) contained white youth from long-term teen leadership programs not enrolled in honors/AP courses. This cluster had the lowest levels of ethical views, problem-solving disposition, and activity involvement. Cluster four ( $n = 40$ ) consisted of a mixture of races, including black ( $n = 20$ , 50%), multiracial ( $n = 9$ , 22.5%), Asian ( $n = 5$ , 12.5%), Native American ( $n = 2$ , 5%), and those who preferred not to state ( $n = 4$ , 10%). This cluster had a mixture of genders and those taking honors/AP courses, and the majority were

from long-term ( $n = 35$ , 87.5%) teen leadership programs. Cluster four had higher ethical views when compared with clusters two and three. Cluster five included white males from long-term leadership programs who take honors/AP courses and have higher ethical views and problem-solving disposition.

**Table 2. Means and Standard Deviations for AEC and Subscales ( $n = 259$ )**

Variable	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	( $n = 82$ )	( $n = 55$ )	( $n = 45$ )	( $n = 40$ )	( $n = 37$ )
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Total AEC	111.9 (9.3)	105.9 (12.4)	107.0 (12.5)	106.6 (12.9)	105.0 (11.6)
Civic Duty	51.8 (7.8)	46.0 (4.8)	46.4 (12.4)	51.7 (5.8)	50.1 (5.9)
Civic Skills	21.3 (4.9)	19.7 (4.7)	17.7 (5.8)	19.2 (5.4)	21.1 (4.3)
Connection	20.1 (5.5)	20.1 (4.6)	19.5 (5.1)	19.1 (4.6)	20.2 (5.3)
Participation	22.1 (4.8)	21.7 (4.1)	20.5 (4.4)	22.5 (4.1)	21.4 (4.6)

*Note.* Connection = Neighborhood Connection, Participation = Civic Participation

We then conducted a one-way ANOVA to compare the effect of cluster membership on total AEC and subscales (Table 3). There was a significant effect of cluster membership on total AEC at the  $p < .01$  level for the five clusters [ $F(4, 254) = 3.76$ ,  $p = .005$ ,  $\eta^2 = 0.05$ ]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for cluster one ( $M = 111.9$ ,  $SD = 9.3$ ) was significantly different from the other clusters (Table 2). There was a significant effect of cluster membership on civic duty [ $F(4, 254) = 7.08$ ,  $p = .000$ ,  $\eta^2 = 0.1$ ]. Post hoc comparisons indicated that the mean scores for cluster one ( $M = 51.8$ ,  $SD = 7.8$ ) and cluster four ( $M = 51.7$ ,  $SD = 5.8$ ) were significantly different from those of cluster two ( $M = 46.0$ ,  $SD = 4.8$ ) and cluster three ( $M = 46.4$ ,  $SD = 12.4$ ). However, cluster five ( $M = 50.1$ ,  $SD = 5.9$ ) did not significantly differ from other clusters. There was also a significant effect of cluster membership for civic skills [ $F(4, 254) = 4.41$ ,  $p = .002$ ,  $\eta^2 = 0.06$ ]. Post hoc comparisons test indicated that the mean score for cluster three ( $M = 17.7$ ,  $SD = 5.8$ ) significantly differed from cluster one ( $M = 21.3$ ,  $SD = 4.9$ ) and cluster five ( $M = 21.1$ ,  $SD = 4.3$ ).

**Table 3. One-Way Analysis of Variance (ANOVA) of Clusters by AEC (AEC) and Subscales ( $n = 259$ )**

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<i>Total AEC</i>					
Between Groups	4	1951.51	487.88	3.76	.005**
Within Groups	254	32991.18	129.89		
Total	258	35942.69			
<i>Civic Duty</i>					
Between Groups	4	1727.89	431.97	7.08	.000***
Within Groups	254	15492.52	60.99		
Total	258	17220.42			
<i>Civic Skills</i>					



Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	4	450.91	112.73	4.41	.002**
Within Groups	254	6494.96	25.57		
Total	258	6945.86			
<i>Neighborhood Connection</i>					
Between Groups	4	40.96	10.24	.40	.809
Within Groups	254	6510.90	25.63		
Total	258	6551.86			
<i>Civic Participation</i>					
Between Groups	4	98.84	24.71	1.24	.295
Within Groups	254	5066.83	19.95		
Total	258	5165.67			

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , 2-Tailed.

## Discussion

In community development efforts, youth are rarely regarded as community resources (Jones, 2009); however, youth's mere presence influences society (Lerner et al., 2005). When equipped with skills and positive attitudes toward citizenship, youth are capable of meaningfully contributing to their communities, which benefits both the individual and the community (Christens & Dolan, 2011). By examining the impact of different variables on youth's AEC, insights can be provided to build youth development and youth leadership programs aimed at preparing youth for community engagement. In this study, there were differences in overall AEC scores and two subscales—civic duty and civic skills—between different clusters of youth in Virginia 4-H teen leadership programs.

Youth in cluster one yielded significantly higher scores for overall AEC when compared with all other groups. This group was comprised of white females from long-term teen leadership programs, who took honors/AP courses and had the highest activity involvement and levels of ethical views. Cluster one and cluster four were revealed to have significantly higher levels of perceived civic duty when compared to clusters two and three. Youth in cluster two were all participants in short-term 4-H teen leadership programs. Although cluster two only significantly differed from clusters one and four, this cluster had the lowest mean score for civic duty and was the only cluster not predominately comprised of youth from long-term programs. Although significant differences existed, we acknowledge that practical significance is relatively low.

Cluster three consisted of participants from long-term leadership programs, but no participants were enrolled in honors/AP courses. Additionally, cluster three had the lowest reported levels of ethical views, problem-solving disposition, and activity involvement. Cluster three also yielded the lowest mean for civic skills and significantly differed from other teens in long-term leadership programs in clusters one and five. When compared with clusters one and five, cluster

three varied by not including youth enrolled in honors/AP courses, and youth had lower levels of ethical views and problem-solving disposition.

These results raise several questions for further examination in relation to the benefits of long-term teen leadership programs when compared with similar short-term programs in Virginia 4-H. With mastery (Redmond & Dolan, 2016) and intentional opportunities for engagement in planning and decision-making processes (Kress, 2006) as the focuses of youth leadership, long-term 4-H teen leadership programs should provide youth with increased knowledge on community issues and capacity for engaging as leaders in their communities. However, there was a clear implication for enrollment in honors/AP courses as a factor significantly impacting overall AEC, civic duty, and civic skills. This was particularly apparent for the civic skills construct, where clusters one and five yielded significantly higher scores when compared with cluster three. Recall that all three of these clusters were white youth in long-term leadership programs. Classes for gifted youth often provide avenues for the development of problem-solving skills and the creation of action plans (Terry et al., 2008), which may have implications for competence in problem-solving. If ethical views, problem-solving disposition, and activity involvement all impact AEC, are the leadership programs increasing these constructs, or are academic courses providing the treatment? This calls for further research on the effectiveness of these programs in relation to the academic achievement of participants.

Neighborhood connection and civic participation did not significantly differ among clusters, regardless of treatment or enrollment in honors/AP courses. These findings could be related to all participants' involvement in 4-H. Lerner et al. (2013) revealed that 4-H members were twice as likely to engage with their communities and four times more likely to contribute to society. Although involvement in 4-H should increase all constructs of AEC, civic participation may be similar for all groups based on community-service opportunities often provided through the organization. Additionally, 4-H has developed curricula and training for the development of strong youth-adult partnerships (Zeldin et al., 2013) for both adult volunteers and extension employees. Youth-adult partnerships are known for supporting youth development by increasing self-worth and other positive outcomes (Anderson & Sandmann, 2009). This increased sense of self-worth, along with positive support from adult and peer role models, may also explain similar levels of neighborhood connection through participation in 4-H programs.

### **Conclusions & Recommendations**

Overall, this study provides insight into the development of AEC in youth participating in 4-H teen leadership programs. AEC, civic duty, and civic skills varied for youth participants based on different clusters derived from program treatment, gender, race, honors/AP course enrollment, age, ethical views, problem-solving disposition, and activity involvement— notable findings related to program treatment, gender, and enrollment in honors/AP courses. Levels of ethical views, problem-solving disposition, and activity involvement also varied between clusters of

participants in long-term teen leadership programs and raised questions regarding the impact of long-term treatment in relation to enrollment in honors/AP courses. Further exploring this phenomenon and infusing teen leadership programs with opportunities for problem-solving and character development could heighten AEC for youth participants.

Cluster one was comprised of white females from long-term teen leadership programs who were enrolled in honors/AP courses and had the highest ethical views and activity involvement. This cluster yielded significantly higher scores for overall AEC and differed from cluster five based only on gender. This raises implications for the consideration of gender differentiation in AEC. Often, females are expected to contribute, but males are viewed as those who cause issues in and do not care about their communities (Hall & Coffey, 2007). Additionally, women in the U.S. volunteer more frequently than men (Einolf, 2010). This used to be attributed to the amount of time and availability connected to work. However, little research has been done that indicates this trend is changing as more women work outside of the home. Therefore, this significant difference may be impacted by more prevalent societal norms, and avenues for overcoming this gender differentiation should be considered in the development of inclusive citizenship curriculum.

Cluster two, which was the only cluster comprised of only short-term program participants, had the lowest levels of civic duty and significantly differed from clusters one and four. This provides support for the role long-term 4-H teen leadership programs may have on a youth's orientation toward citizenship and community involvement. With mastery (Redmond & Dolan, 2016) and intentional opportunities for planning and decision-making processes (Kress, 2006) as aims of youth leadership, long-term programs should provide youth with increased knowledge and competence for engaging as leaders and community problem solvers. However, there was also clear inference for the impact of enrollment in honors/AP courses as a factor significantly impacting overall AEC, civic duty, and civic skills. Youth programming should focus on increasing competency and providing more opportunities for decision-making and problem-solving at the community level.

Cluster three had the lowest reported levels of ethical views, problem-solving disposition, and activity involvement and was comprised of participants in long-term leadership programs who were not enrolled in honors/AP courses. Cluster three yielded the lowest mean for civic skills and significantly differed from clusters one and five, which were of a similar demographic makeup with the exception of enrollment in honors/AP courses. Additionally, cluster three reported significantly lower levels of civic duty when compared with clusters one and four. Based on this finding, it is important to consider exploring the relationship between academic achievement and participation in long-term leadership programs, problem-solving disposition, ethical views, and AEC. Because gifted courses often include opportunities for the development of problem-solving skills and the creation of action plans (Terry et al., 2008), there are

implications for a youth's views, attitudes, and beliefs on problem solving based on their overall feeling of competence.

There were several limitations in this study. The first overarching limitation was the ex post facto design of the study and sampling frame. The extension agents were the gatekeepers for access to youth, and signed parental consent was required for participation. This reduced the sampling frame and impacted the response rate. Although recorded and analyzed, the researcher had little control over the demographic backgrounds and make-up of the subgroups within districts, which may have impacted overall results and generalizability. The person-centered analysis helped to mitigate some of these sampling challenges, but additional research with a wider frame is recommended to increase the generalizability of findings. Another limitation related to the AEC instrument not being revalidated following the addition of social media to the list of ways to advocate in your community. Increasing the sample size to revalidate this instrument is recommended for future research.

Based on the findings, there are several recommendations for practice and research moving forward. The first recommendation, which is related to practice, is to consider methods for increasing character education and problem-solving opportunities associated with community issues and development to increase AEC in all youth participants. Findings indicated that participation in a long-term 4-H teen leadership program alone did not indicate higher levels of AEC when compared with the cluster of youth who participate in short-term programs. Further, participants of short-term programs had the lowest scores on the civic duty subscale. This indicates a need for short-term 4-H teen leadership programs—such as camp-counselor trainings—to make connections between the purpose of the training and contributions to society. As proposed by Sherif (2019), ethics is a central component to youth leadership and should be incorporated in leadership education curricula to maximize leadership development and potential.

It is also recommended for Extension professionals and other youth-leadership practitioners consider the role gender may play in the development of AEC. Hall and Coffey (2007) discussed gender differentiation in citizenship, saying “much of the current negative and anxious commentary about young people and the ‘don’t care’ culture is implicitly, and sometimes explicitly, directed at young men in particular” (p. 294). They note that women are expected to contribute, but males are often viewed as noncontributors. Based on this notion, sociocultural development of views toward citizenship may differ based upon gender, which would explain the variations between similar clusters differing predominately on gender alone, especially the differing levels of AEC. It is recommended that teen leadership professionals ensure programs promote gender inclusion in citizenship-focused curricula and think intentionally about the engagement of males as contributors to their communities.

With citizenship as a priority in 4-H (National 4-H Headquarters, 2011), professional development is needed for Extension agents to fully understand the inner workings of these clusters and how program improvements and adjustments may aid in increased levels of AEC. These clusters allow us to examine how indicators combine to impact independent variables. Therefore, social science researchers should also consider how results may differ from traditional variable-centered analyses and consider a variety of statistical methods to ensure participants are treated as heterogeneous in nature. It is essential to keep in mind how individual development is a result of the bidirectional relationship between an individual and their context over time.

Program goals of 4-H indicate high priorities for the development of self and abilities to be meaningful contributors to their communities (4-H National Headquarters, 2011). Therefore, it is recommended that future research and replication include a wider range of teens not participating in 4-H or teen leadership programs in order to derive comparison from the impact of the 4-H program on AEC, problem-solving disposition, and ethical views. Further, the relationship between enrollment in honors/AP courses and ethical views and/or problem-solving disposition should be further explored.

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