Feature Article

Developing Leadership Talent in Adolescents and Emerging Adults: A Systematic Review

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Abstract

Leadership talent development has been identified as a priority in national and state standards for gifted education. However, leadership programs in schools are not always supported by mandates or funding in individual states and implementation is not always feasible within the constraints of local gifted service models. Although some research has been devoted to leadership for gifted and high-ability adolescents and emerging adults, a limited number of studies on the identification, measurement, and development of leadership talent have been conducted. This systematic review of literature examined existing research on leadership talent development for adolescents and emerging adults. A database search identified 38 quantitative, qualitative, and mixed methods studies that were screened, summarized, and synthesized for discussion. The review highlighted research contexts, definitions of leadership, and themes that captured the recommendations researchers made across studies. Implications for developing leadership talent and suggestions for future research are discussed.

Keywords

adolescents, emerging adults, leadership, systematic literature review, talent development

Leadership talent development has been clearly identified as an important element of gifted programming in state and national standards. Nearly 50 years ago, the Marland (1972) report defined gifted and talented students as those "who require differentiated educational programs" in order to meet their academic potential (p. 2). The report to the United States Congress specifically listed "leadership ability" as a domain of giftedness and by extension, an area where schools may choose to focus on providing services and developing talent (Marland, 1972, p. 2). Almost five decades later, the National Association for Gifted Children's *Pre–K to Grade 12 Gifted Programming Standards* (National Association for Gifted Children, 2019) still emphasized the need to create educational experiences for children and adolescents that include "developing leadership" and "personal and social responsibility" (p. 12). Sixteen states[1] list leadership in their definitions of giftedness and descriptions of gifted services (Rinn et al., 2020). However, individual states have different approaches to accountability and funding for leadership development within gifted service models. So, states may list leadership in definitions of giftedness, but differ on whether services are mandated or not and whether services are funded or not (Matthews, 2015; see also Rinn et al., 2020).

Although national and state standards for gifted education stress the importance of leadership talent development opportunities, resources are limited and school districts often struggle to provide programming beyond core academic subjects. As a result, many schools leave leadership development to athletics, fine arts, clubs, and student organizations (Funk, 2002). Although some scholarly attention has been paid to leadership talent development (e.g., Lee et al., 2020; Pfeiffer & Wechsler, 2013; Roach et al., 1999), a limited number of empirical studies on the identification, measurement, and school-based development of leadership talent for adolescents and emerging adults have been conducted (Matthews, 2004, 2015). Leadership scholars (Ridell, 2017) have noted that the Baby Boomer generation is on the verge of retirement, which will result in "a shortage of skilled workers in western economies" and "an imminent gap in leadership" (p. 532) in adult professional domains. Scholars in gifted education (Renzulli, 2012) have emphasized that school-based programming should focus on equipping young people to solve societal problems by developing mind-sets that put "human concerns and the common good above materialism, ego enhancement, and self-indulgence" (p. 156). There is a critical need for ethical leaders in society and school-based talent development programs can play a role in helping students develop leadership competencies in authentic contexts to prepare them to fill those roles. In this systematic review, we examine empirical research on leadership talent development

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for adolescents and emerging adults to explore the conceptions of leader development presented in the literature and to identify productive avenues for future research.

Identity Development

Adolescence is a broad developmental period between the ages of 10 and 17 years that is characterized by biological development and identity exploration (Erikson, 1968; Marcia, 1980). Emerging adulthood, the developmental period between the ages of 18 and 25 years, is a time when individuals make commitments in major life domains, such as education or occupations (Arnett, 2000). In adolescents and emerging adults, identity exploration and commitment are best thought of on a continuum with each process creating reciprocal effects (Crocetti et al., 2008). For example, an adolescent may enjoy learning about government and through a series of educational and career explorations conclude that they want to pursue a leadership position in public office. Through commitments to learn more about the path to politics, such as a summer internship or a postsecondary major in political science, the individual might feel even more strongly about the commitment. On the other hand, they might reconsider that identity and start the exploration process again. Once an individual has developed an identity in a domain and committed to talent development, continued engagement allows, and often requires, these individuals to take on leadership roles through innovative creative production or substantial professional contributions to the field (Crocetti et al., 2008; Lubinski & Benbow, 2006; Subotnik et al., 2011).

Talent Development

In 2011, Subotnik et al. published a landmark paper in gifted education that called for researchers and practitioners in the field to embrace domain-specific talent development for identifying and serving the needs of high-ability learners. The talent development framework advances five key points: (a) abilities within talent domains can be developed; (b) paths for developing talents vary by domain; (c) opportunities for talent development should be provided to learners, but they also have to accept them; (d) psychosocial skills (noncognitive skills, such as motivation and persistence) should be nurtured to support the rigor of high-level talent development; and (e) the outcome of gifted education should be eminence (Subotnik et al., 2011). One of the most hotly contested points in this conception of talent development is the goal of eminence. Many argue that personal fulfillment should be the goal of education programs that serve students with gifts and talents and that expecting eminent contributions puts undue pressure on these high-ability individuals (Borland, 2003; Dai, 2017; Renzulli, 2012). However, it is worth looking closer at the authors' definition of eminence, which they "characterize as contributing in a transcendent way to making societal life better and more beautiful" (Subotnik et al., 2011, p. 7). If talent development programs, both in and out of school, prepare learners to contribute to society by creating and leading in their areas of interest and strength, these learners may also achieve self-fulfillment. So, for gifted education, the goals of setting students up for the possibility of eminence and helping young people find self-fulfillment may not be completely at odds (Dai & Chen, 2014), and both of these goals can be supported through leadership talent development.

Individuals in adolescence and emerging adulthood assess their abilities and preferences, choose from opportunities, and invest their time in pursuits they find personally meaningful. Dai (2017) contended that one major factor in talent development is characteristic adaptation, or "the spontaneous self-organization of inner resources in response to environmental opportunities and challenges" (p. 175). The choices individuals make, and the adaptation that occurs as a result, shape talent development trajectories. Once an individual has explored potential talent development opportunities, they engage in maximal adaptation, or "purposeful acts to perfect one's trade, and surpass oneself " (Dai, 2017, p. 175). Furthermore, when an individual has explored possible identities and made a conscious commitment to a domain, that individual may take on leadership responsibilities.

Leadership Talent Development

The construct of leadership has been extensively researched in adult professional contexts and specialized domains, such as the armed forces, but there are multiple theoretical viewpoints and numerous definitions of leadership.

Theoretical Viewpoints on Leadership

Transformational leadership theory (Bass, 1985; Qian et al., 2020) asserts that leaders can motivate team members and keep organizational morale high by building relationships, providing new insights, inspiring others, and emphasizing a sense of purpose through role modeling. Transformational leadership focuses on the development of leader behaviors that motivate and inspire members of an organization. Ethical leadership theory (M. E. Brown et al., 2005; Shakeel et al., 2019) posits that leaders must engage in morally appropriate conduct in their personal lives and in their business interactions (e.g., interpersonal communication, decision-making) to protect the collective interests of the organization and team members. Ethical leadership prioritizes the morality of the actions leaders take while facilitating work within the organization. Servant leadership theory (Greenleaf, 1977; Saleem et al., 2020) emphasizes that leaders whose primary focus is serving others can earn the trust of their team members while simultaneously improving the functioning of the organization. Servant leadership focuses on leading by example and engaging in continuous evaluation

and self-assessment. These theoretical viewpoints on leadership represent only a small portion of the perspectives in published literature, but they highlight the fact that contemporary leadership theories tend to focus on motivating others to achieve a goal by providing inspiration, by reflecting on effectiveness at regular intervals, and by adapting in response to feedback. In addition, these perspectives identify leadership behaviors that are valued in the professional domains gifted and talented students may choose as adults.

Definitions of Adult Professional Leadership

Definitions of leadership in published literature are abundant, but there is no consistent definition (Matthews, 2004, 2015). Sinek (2009) asserted that "those who lead are able to do so because those who follow trust that the decisions made at the top have the best interest of the group at heart" (p. 85). This description of leadership points out that to lead, an individual must inspire those they lead by establishing trust and creating a collaborative culture. B. Brown (2018) defined a leader as "anyone who takes responsibility for finding the potential in people and processes, and who has the courage to develop that potential" (p. 4). This definition highlights the fact that leadership is not dependent on formal roles, but rather the actions one takes to develop the potential in those around them and to optimize the functioning of the organization. The United States Army defines leadership as "the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization" (Department of the Army, 2015, p. 12). This definition underscores the fact that leadership operates within the constraints of the assigned task and the context of the organization. Taken together, these definitions operationalize leadership as a process that requires the development of interpersonal skills to influence others to pursue a common goal and to work for the greater good of the organization. This is only a sampling of the many definitions of leadership in various adult professional domains, but these definitions provide insight into how leadership is conceptualized in a range of postsecondary careers that gifted and talented students may pursue.

Youth Leadership Talent Development

Because studies of leadership can be approached from numerous theoretical perspectives and leadership can be defined and operationalized in multiple ways, empirical investigation and the comparison of findings across studies can be difficult (Matthews, 2015). The lack of a unified definition also contributes to issues with identification and measurement. When used with children and adolescents, many of the scales for measuring leadership facets have shown inconsistent validity and reliability (Matthews, 2004; Roach et al., 1999; Shaunessy & Karnes, 2004). Although there may be some connections between aspects of adult leadership and youth leadership, conceptions of adult professional leadership are not sufficient to guide the intentional, systematic development of emerging leadership talent (Pfeiffer & Wechsler, 2013). Roach et al. (1999) urged gifted education professionals to discard the "individual, incremental, and competitive model" (p. 21) of adult leadership when designing programs for children and adolescents. Rather, youth leadership should focus on "self-knowledge," "commitment to relationships that sustain group goals," and "skills necessary for constant collection and assessment of information" (Roach et al., 1999, p. 21). In an examination of adolescent decision-making in applied leadership contexts, Ridell (2017) noted that young people must "develop a leadership identity which includes both the motivation to lead" and competence in "leadership behaviours," such as risk-assessment and decision making, and suggested that "experience with leadership positions and mentorship by successful leaders can accelerate this process" (p. 544). In a cross-cultural study investigating gifted students' perceptions of leadership (Lee et al., 2020) students who were unmotivated to take on leadership tasks "attributed their low interest in leadership development to a lack of leadership experiences in school" (Lee et al., 2020, p. 27) and those who were interested in developing expertise and leading within their community showed higher levels of motivation to take on leadership roles. These studies emphasize the importance of providing school-based opportunities for leadership talent development embedded in domains of interest to gifted and talented students.

Leadership talent development for adolescents and emerging adults should include components of talent development (e.g., developing abilities, plotting trajectories, providing opportunities, addressing psychosocial skills, and striving for excellence) applied in specific domains with support for taking on more complex responsibilities and leadership roles (Dai, 2017; Matthews, 2004; Subotnik et al., 2011). In Matthews' (2004) review of literature on leadership education for gifted youth, he identified "some common denominators that appear in most characterizations of youth leadership," which include (a) "its social nature," (b) "its developmental aspects," and (c) "its particular context" (p. 79). The social aspects of youth leadership involve interactions with others and relationship building. In addition, learning to lead is a developmental process that requires individuals to strengthen general skills (e.g., communication, self-assessment) and domain-specific skills (e.g., creativity, understanding organizational hierarchies). Leadership is also contextual, in that it cannot "exist apart from a performance area" (Renzulli, 1978, p. 83). These three elements of youth leadership (social, developmental, and contextual) provide a framework with which to explore the literature on leadership talent development for adolescents and emerging adults.

Theoretical Framework

Marcia (1980) and others (e.g., Crocetti et al., 2008; Luyckx et al., 2006) describe identity development as a process of exploration and commitment. Dai (2017) situated this identity development cycle within the framework of talent development and identified characteristic adaptation (i.e., exploration) and maximum adaptation (i.e., commitment) as two processes that help individuals move from ability and interest to competence and expertise in a domain, given favorable contexts. Matthews (2004) suggested that youth leadership was best understood as a process that is social, developmental, and contextual. This systematic review of literature was guided by sensitizing concepts from identity development (e.g., exploration, commitment, reconsideration of commitment), talent development (e.g., ability, domain-specific skills, trajectories, opportunity, psychosocial skills, characteristic adaptation, maximum adaptation), and adolescent leadership development (e.g., social, developmental, contextual).

Purpose

Adolescence and emerging adulthood are critical periods for identity development and talent development. Adolescents in secondary school environments are preparing to make decisions about college enrollment, career training, or vocations that merge continuing education and career development, such as military service. Emerging adults in undergraduate studies or the workforce evaluate the commitments they have made and either reconsider those commitments or invest in them more deeply (Arnett, 2000; Crocetti et al., 2008). The purpose of this systematic review of literature was to examine existing research on leadership talent development for adolescents and emerging adults. The development of leadership talent can be situated in educational, organizational, or career-related contexts, so this review examined the different contexts presented in research literature. There is no unified definition of leadership talent development, so this review also explored how researchers defined or operationalized the construct of adolescent and emerging adult leadership in the literature. Finally, scholars make recommendations for how to implement research-based practices for leadership talent development in their studies, so this review identified common themes among those suggestions for developing leadership capacity in adolescents and emerging adults.

The following research questions guided the systematic review of literature:

Research Question 1: In what contexts is adolescent and emerging adult leadership talent development explored in the literature?

Research Question 2: How is the concept of leadership defined or operationalized in the empirical literature on adolescent and emerging adult leadership talent development?

Research Question 3: What recommendations are made for adolescent and emerging adult leadership talent development?

Method

For this systematic review of literature, articles on leadership talent development were gathered, screened, and assessed for risk of bias. Data related to the research questions were extracted, summarized, and synthesized for discussion (Gough et al., 2017; Marshall & Sykes, 2011). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses checklist guided the data collection, article screening, data analysis, and reporting processes (Liberati et al., 2009; Moher et al., 2009).

Data Collection

Database Search

Database selection. Advanced searches were performed in Academic Search Complete, Education Database, Educational Resources Information Center (ERIC) via EBSCOHost, Education Source, Professional Development Collection, PsycARTICLES, Psychology and Behavioral Science Collection, PsycINFO, and Sage Journals Online.

Search terms. In each of the databases, the terms "leadership" and "development" were used to search the abstracts, and the terms "talent" and "adolescent" were used to search the complete texts.[2] Searches were limited to peer-reviewed, full-text articles in English. No date restrictions were specified. The database search was completed in January 2020.

Inclusion Criteria

Initial screening. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses four-phase flow diagram guided the article screening process (Liberati et al., 2009; Moher et al., 2009). The combined searches from all nine databases yielded 363 articles. Once duplicate articles were removed ($n = 129$), each remaining record ($n = 234$) was screened to ensure it was a peer reviewed, full-length text in English. Two articles had abstracts in English, but full texts in another language, so they were removed from the analysis. The title and abstract of each article were screened to ensure that the article addressed the topic of youth leadership development. Subsequently, 62 articles were removed from the analysis because they did not examine the construct of leadership, despite the presence of the word leadership in the title or abstract (e.g., Ihrig et al., 2018). Next, the abstract and methods section of each article were examined to determine if it was an empirical study (i.e., quantitative, qualitative, or mixed methods). A large number of articles

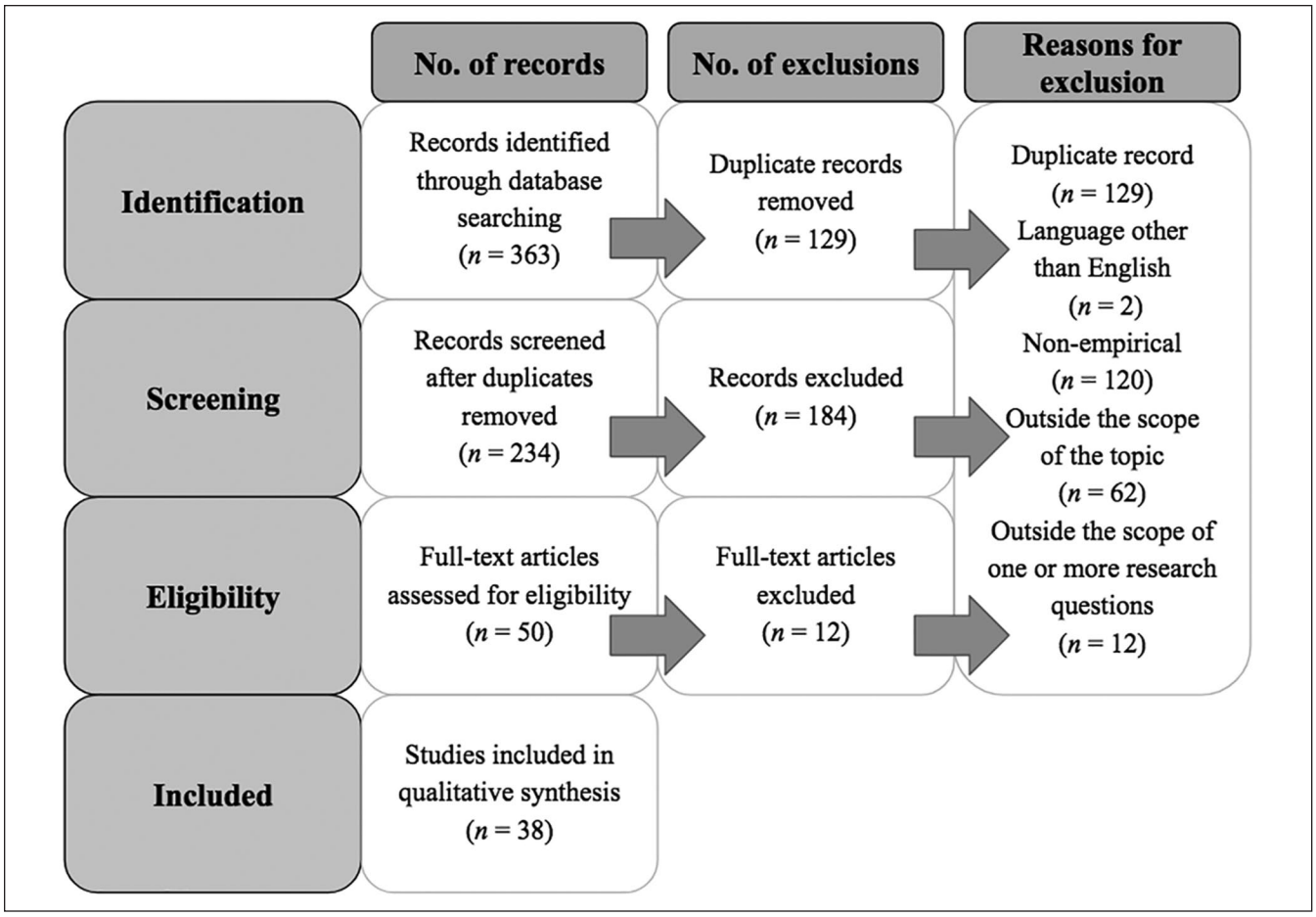

Figure 1. Article screening flow diagram
Note. Flow diagram adapted from the PRISMA flow diagram (Liberati et al., 2009; Moher et al., 2009). PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

(n = 120) were theoretical frameworks or informational texts (e.g., Dempster & Lizzio, 2007), so they were removed from the analysis to focus on empirical studies.

Eligibility screening. The abstract and full text of each remaining article (n = 50) was screened to determine if it was within the scope of the research questions. Each article that discussed youth leadership development and defined or clearly operationalized the term *leadership* was included in the systematic review. Several articles (n = 12) were excluded from the final analysis because they were outside the scope of the research questions (e.g., Simonton, 2008), which left a total of 38 articles for review (see Figure 1). Six of the search returns focused on leadership development for undergraduate college students, who fall in the developmental period of emerging adulthood, rather than adolescence. The decision was made to retain these articles in the systematic review because they covered the developmental period immediately after adolescence (Arnett, 2000), they discussed how leadership development began in adolescence, and they analyzed conceptions of leadership talent relevant to adolescents moving into similar postsecondary settings for continued talent development. The research questions were revised to include emerging adulthood.

Quality and risk of bias screening. The authors critically examined the quality, potential risk of bias, and methodology of each study (Gough et al., 2017; Liberati et al., 2009). This screening phase yielded quantitative studies (n = 11), qualitative studies (n = 19), and mixed methods studies (n = 8), so the Mixed Methods Appraisal Tool was used to screen each study prior to data collection (Hong et al., 2018). All of the included articles (n = 38) were evaluated on two general screening questions and five method-specific questions for quantitative, qualitative, and mixed methods studies (see the Supplemental Material available online). No studies were removed from the analysis based on the quality and risk of bias screening, but the information from the appraisal did inform whether studies were interpreted as methodologically sound or with caution (Hong et al., 2018).

Data extraction. After critical evaluation with the Mixed Methods Appraisal Tool screening tool, each article was reread to extract study-specific information and data related to the research questions. A spreadsheet was created to combine the elements of PICOTT (participants, intervention, comparison, outcome, type of research question, type of study design; Marshall & Sykes, 2011; Schardt et al., 2007) and the research questions for this systematic review. Study information (e.g., location), the elements of PICOTT, and data on each of the research questions (e.g., study context, operationalization of leadership, recommendations for leadership talent development) were recorded. The articles included in the systematic review are summarized in a table (see Table 1) to highlight the salient features of each of the studies retained for the analysis.

Data Analysis

Coding and Categorizing Leadership Contexts. The contexts of the empirical studies were inductively analyzed (Thomas, 2006). Each specific research context (e.g., geographic location, setting, program type) was recorded and descriptively coded. The authors analyzed the codes to identify patterns across articles and create categories and subcategories (Saldana, 2016). If a study could be classified into more than one category, subcategories were created. For example, 11 studies examined leadership talent development on university campuses, but five focused on summer residential programs for high school students, three examined undergraduate courses, and three explored undergraduate professional organizations, so three subcategories were created.

Content Analysis of Leadership Definitions. A qualitative content analysis of the definitions and operationalization of leadership was conducted (Elo & Kyngäs, 2008; Schreier, 2012). For each article, definitions of leadership were recorded, labeled with descriptive codes, and analyzed for patterns (Saldana, 2016). If leadership was not specifically defined, the way it was operationalized was documented (i.e., leadership role occupancy). The inductive descriptive coding yielded 13 distinct codes. Descriptive codes were organized under three a priori categories, which included social (i.e., group process, other-oriented service/leadership, and social influence), developmental (i.e., ability/competence, domain-specific skills, psychosocial skills, development over time), and contextual (i.e., accountability, authentic application of skills, goal achievement, socially/culturally situated) elements of leadership (Elo & Kyngäs, 2008; Matthews, 2004; Schreier, 2012). Codes were categorized as social if they involved interactions between people. For example, group process was categorized as social because group members have to work together to accomplish a goal. Codes were categorized as developmental if they captured an ability or skill that could be strengthened over time. For example, psychosocial skills (e.g., motivation, persistence) were classified as developmental because they can be improved over time with coaching and practice. Codes were categorized as contextual if they involved an aspect of leadership that was context-dependent. For example, accountability and goal achievement were categorized as contextual because leaders in different contexts are accountable to different authority figures and have different rewards or consequences for accomplishing or not accomplishing goals. The authors discussed the coding of leadership definitions and negotiated agreement on the placement of codes within the a priori categories. Based on the inductive analysis and descriptive coding, two emergent categories were created. The first emergent category captured definitions of leadership that focused on the personality characteristics of leaders (i.e., individual traits). These definitions discussed individual traits in a broad sense and there was not enough information to determine whether that definitional element should be classified as social or developmental, so it was retained as an emergent code. The second emergent category identified those articles that did not define leadership, but operationalized it as leadership role occupancy (see Table 2). The articles were examined in chronological order to identify possible trends in defining youth leadership over the past three decades.

Thematic Analysis of Author Recommendations. The recommendations for adolescent and emerging adult leadership talent development made by the authors of the included studies were inductively analyzed by reading the results and discussion section of each research study and recording the specific recommendations (Thomas, 2006). Major recommendations from each individual article were descriptively coded. The 18 descriptive codes were analyzed for patterns across articles and organized into four categories (Braun & Clarke, 2006; Ryan & Bernard, 2003). We discussed the contents of each category and synthesized the recommendations into four themes related to adolescent and emerging adult leadership talent development (see Table 3).

Findings

A total of 38 articles, with publication dates ranging from 1988 to 2019, met the inclusion criteria. The sample, context, type of data collected, findings or results, and implications of the individual studies are described in Table 1. The following sections present the findings on the research contexts, the content analysis of the definitions of leadership, and the thematic analysis of the recommendations in the literature.

Research Contexts

Geographic Locations. Although the majority of the studies ($n = 29$) were conducted with participants from the United States, the review also included studies with participants from Australia ($n = 2$; A. Coffey & Lavery, 2018; Eva &

Table 1. Summaries of Included Studies.

Author (year), country	Sample and context	Data collected	Results/findings	Implications
Quantitative studies (n = 11)				
Chan (2003), China	60 Gifted/academically advanced secondary students in a 6-week Creative Leadership Training Program	Pretraining and posttraining assessment of divergent thinking (WKT), leadership (RRSL), communication (ICCS), public speaking (SPPSC), and problem solving (SPSI)	Slight increases noted on perceived leader self-efficacy. Statistically significant gains noted for ideational fluency, perceived competence in communication/public speaking, and emotional regulation.	Creative process, interpersonal, and psychosocial skills may also support leader development. Short duration programs without opportunities to apply emergent leadership skills may not be as effective.
Gassman et al. (2014), The United States	743 Current/former members of the Nonprofit Leadership Alliance Student Association (NLASA) across 69 universities	Author created survey with questions about demographics, participation in NLASA, and experiences within the organization	Members who participated for at least three semesters/held leadership roles reported group activities helped them develop career leadership competencies (e.g., communication, volunteer management).	Individuals with higher levels of engagement perceived greater benefits from opportunities to apply emergent leadership skills in authentic career-related contexts in a college learning organization.
Henderson et al. (2007), The United States	2,294 Parents whose child attended a residential summer camp for one week or longer	52-Item parent questionnaires with Likert-type scale questions about leadership, decision making, peer relationships completed before, after, and 6 months after camp	There were statistically significant increases in parents' perceptions of their children's leadership ability between precamp, postcamp and 6-month follow-up questionnaires.	Adolescents and adults (e.g., parents) differed on their perceptions of effective leadership development, so collaboration may lead to higher levels of adolescent buy-in and engagement.
Kudo et al. (2012), the United States	245 Boys and girls between 14 and 18 years old enrolled in Boys Scouts of America programs in the state of Hawaii	63-Question survey with scales to measure parenting style (PSI), emotional autonomy (EAS), leadership (MLQ), mastery orientation (ITIPS-C, SAQ)	Authoritative parenting was positively correlated with mastery goal orientation. Task-irrelevant and avoidance behaviors were negatively correlated with leadership competencies.	Supportive parents can aid in the early development of goal orientations and psychosocial skills that support leader identity and leader self-efficacy (e.g., mastery goals, self-beliefs).
Lee and Olszewski-Kubilius (2006), The United States	234 Gifted students in the Civic Leadership Institute (CLI; n = 121) or Equinox (n = 113) 3-week summer residential programs	Scales measuring emotional intelligence (EQI), moral development (DIT-2), leadership (RRSL)	High leadership potential was not necessarily associated with advanced moral reasoning, and high academic ability was negatively correlated with leadership.	Gifted students have the potential to become leaders, but programs/interventions are needed to support psychosocial skills and moral reasoning as they move from potential to competence in leadership roles.
Lee et al. (2007), The United States	230 Gifted students in the Civic Leadership Institute (CLI; n = 118) or Equinox (n = 112) 3-week summer residential programs	3 Surveys designed to measure civic responsibility (CRS), civic behavior (CBS), and leadership (RRSL) were administered before, after, and 6 months after the program	CLI participants who engaged in service learning showed increases in their sense of civic responsibility over time, but no statistically significant differences in leadership.	Students who receive training in leadership/civic engagement need opportunities to apply that learning in authentic situations over time.
Liu et al. (2019), China	1,255 Male (48.2%) and female (51.8%) adolescent students across 13 junior high schools, their parents, and teachers	Leadership rated by peers (RCP), teachers (ABL), parents (ABL), and role occupancy Scales: overparenting (HPS), self-esteem (RSES), leader self-efficacy (RRSL), social desirability (NSDS)	Overparenting was negatively related to perceived and actual leader emergence, but was mediated by self-esteem and leader self-efficacy. Males in the sample perceived more overparenting.	Leadership is a self-reinforcing process that requires developing a leader identity, and overparenting is detrimental to that development.

(continued)

Table 1. (continued)

Author (year), country	Sample and context	Data collected	Results/findings	Implications
Lucas and Goodman (2015), The United States	14 Undergraduate students engaged in project-based learning in a Leadership and Positive Organization class	WCA administered at the beginning and end of the semester to measure knowledge, positive psychological functioning (SPW)	Participants reported perceived gains in self-efficacy, self-assessment, and stress management related to long-term collaborative group project.	Leader development outcomes (i.e., self-efficacy) improved when applied to authentic problems over time with a balance of autonomy and feedback/direction.
Salisbury et al. (2012), The United States	2,931 First-year college students across 19 institutions	Wabash National Study precollege survey and first-year follow-up survey including measures of student engagement (NSSE) and student experiences (SES)	Off-campus work (20+ hours/week) was positively correlated with leadership development, more so than on-campus work or extracurricular engagement.	Work experience in a specific domain may be more directly related to developing leadership talent than extracurricular participation due to accountability for performance and/or production.
Schneider et al. (1999), The United States	242 High school students in a self-selected leadership program	Students assessed on personality (MBTI), interests/skills (CISS), motivation (MSCS), leadership (LGD), academic ability (GPA) Teachers submitted 3 ratings of student leadership behaviors	Teachers rated students with higher academic ability more favorably on leadership (socioemotional, task-goal). Ratings accounted for maximal (one-time LGD) and typical performance over time.	The interaction between academic ability and noncognitive factors (e.g., motivation, interests) explained more of the variance in teacher ratings of student leadership than ability alone.
Weinberger (2014), The United States	Seniors in the graduating classes of 1972 (n = 15, 292), 1992 (n = 8,016), and 2004 (n = 9,878)	Participation, leadership, and math achievement data from: Project Talent (1960) and NCES NLS (1972), NELS (1992), and ELS (2004) Census data from 1999 for adult wage regression calculations	Results indicated strong positive correlations between math achievement and adult earnings for black male high school graduates, and between leadership and future earnings for black females.	Opportunities for leadership were not available to all students and school accountability systems may create conflicts for students who must choose between academic achievement, extracurricular engagement, and leadership roles.
Mixed methods studies (n = 8)				
Bernstein et al. (2019), The United States	677 Intellectually talented youth from the Study of Mathematically Precocious Youth (SMPY); 605 high performing graduate students	Youth assessed for ability and preferences at 13 and 35 years later for professional eminence Graduate students assessed for ability and preferences early in the program and 25 years later for professional eminence	High-ability coupled with high preference in math/science or verbal/humanistic domains was predictive of eminent leadership and creative-production by age 50 years for both the youth and graduate student samples.	Ability alone is not enough to predict adult eminence, but early ability patterns are related to the talent domains individuals choose to pursue and the talent development opportunities they seek out and/or accept.
Bush et al. (2019), The United States	Cohorts one (n = 12) and two (n = 14) of the Teen Excellence in Leadership Institute (TELI) for 4-H/FFA students in Virginia	4-H Citizenship Common Measures (4-H CCM) assessment administered before and after the institute; Focus groups with cohort two participants	Participants reported perceived growth in understanding of self, networking, problem-solving, advocacy (4-H CCM), social, and psychosocial skills (focus group).	Student leaders benefitted from instruction in leadership skills followed by application opportunities, accountability, and support.
L. Coffey and Davis (2019), The United States	47 Male and 25 female former college athletes; 21 male and 16 female employers	Student-athlete survey with open-ended responses; Employer survey with open-ended responses	Athletes reported that skills they learned in sports (e.g., collaboration) transferred to their careers more directly than did classroom learning.	The leadership skills student–athletes develop in collegiate sports represent human capital that is valuable to potential employers (e.g., communication, multitasking).

(continued)

Table 1. (continued)

Author (year), country	Sample and context	Data collected	Results/findings	Implications
Eva and Sendjaya (2012), Australia	33 Student leaders, 10 teachers and principals, 97 recent graduates connected to youth leadership programs in Australian secondary schools	Interviews with student leaders, teachers, and principals Surveys of recent graduate perceptions	Modeling and mentoring (transforming influence) were components all parties agreed were beneficial to leader development. Moral reasoning (responsible morality) was an element that teachers had difficulty presenting.	Leadership skills (i.e., collaboration) need to be explicitly taught with time for discussion/incubation before application.
Guest (2018), The United States	360 Students in a suburban Catholic high school (SCHS; higher SES) and 113 from an urban Catholic high school (UCHS; lower SES)	Students surveys (YES); observation of sports, arts, and leadership/service activities; interviews; and document analysis	In the SCHS service learning (SL) was systematic, focused on social responsibility. In the UCHS, SL was framed as performing charitable acts periodically. SCHS students reported SL provided helpful identity and career explorations.	Extracurricular programs with faculty sponsors who hold asset mind-sets may be more conducive to leadership talent development than those with sponsors who hold deficit views of their schools and resources.
Hartzell and Hong (2016), The United States	Master's level graduate students in science ($n = 12$), the arts ($n = 12$), and education ($n = 14$)	All participants completed the AAI; interviews conducted with 4 students from each domain	Graduate students engaged in extracurricular activities reflective of their abilities, interests, and graduate majors (e.g., education students in social leadership) early.	Exploration of career-related domains in high school allowed students to develop domain-specific knowledge and leadership skills, and to make informed decisions about their postsecondary paths.
Kell et al. (2013), The United States	253 Males and 67 females from the third cohort of the Study of Mathematically Precocious Youth (SMPY)	Math and verbal ability measured at age 13; professional leadership and accomplishments identified at age 38 years	Individuals with high ability in adolescence made eminent professional contributions by age 38 (e.g., publication, leadership).	Above level assessments provided insights into students who could benefit from talent development and preparation for adult professional leadership roles.
Makel et al. (2016), The United States	Replication of Kell et al. (2013) with 259 high-performing youth who participated in Duke TIP	SAT math and verbal scores in adolescence; degrees, careers, and professional accomplishments in adulthood	Ability levels are related to magnitude of accomplishment. Ability patterns (abilities and interests) are related to the paths that individuals choose.	Early identification of human capital (i.e., scores on above level tests) can predict adult leadership roles and creative production, but individuals must commit to the development opportunities available to them.
Qualitative studies ($n = 19$)				
Archard (2013), Australia, New Zealand, South Africa, and England	186 School staff members, 38 student leaders, and 7 women in professional leadership roles who attended or worked in all-girl schools	Document analysis, school staff surveys, student leader virtual focus groups, and interviews with women in professional leadership	Staff, students, and women professionals identified potential obstacles to developing a female leader identity, including same-sex peer conflicts, lack of confidence, and limited opportunities to lead.	Schools can help girls develop a leader identity by providing leadership experiences that include role modeling and mentoring and by discussing potential gender-related obstacles (e.g., stereotypical gender roles, gender norms) in professional domains.
Carruthers and Busser (2000), The United States	25 Staff members, 61 club members, and 17 parents involved in the Boys and Girls Club	Participant observation, semistructured interviews, and program goal analysis over a 30-week period	Staff/participants felt that the broad scope of the program limited leader development opportunities to role modeling and reinforcing positive social behaviors.	In youth organizations where leader development is one of many goals, balancing immediate participant needs and program goals may create conflicts for staff members.

(continued)

Table 1. (continued)

Author (year), country	Sample and context	Data collected	Results/findings	Implications
A. Coffey and Lavery (2018), Australia	7 Educational leaders across 6 Australian middle schools	Interviews with educational leaders (e.g., principals) about leadership opportunities for students in the middle years (10-15 years)	Educational leaders stressed the importance of having formal and informal leadership roles for early adolescents.	Age-appropriate leadership opportunities should allow students a role in decision-making and responsibility for implementation.
Conner and Strobel (2007), The United States	2 Girls who transitioned from members to leaders in the Youth Engaged in Leadership and Learning program over 3 years	Participant interviews at the beginning and end of each year, a focus group conducted at the end of the second year, and interviews with adult staff members	Three years of engaging in increasingly complex leadership tasks helped each girl develop a leader identity and a leadership style that maximized her strengths.	Leadership development takes time and can be supported by reflection, goal setting, praise, and positive reinforcement.
Feldhusen and Kennedy (1988), The United States	21 Teachers and counselors in the GERI 2-week summer residential programs for gifted and academically advanced adolescents	Survey with 9 open-ended questions about leadership potential, behaviors, and growth observed during the 2-week session	Teachers/counselors reported that leadership potential was demonstrated by students who were extroverted, took initiative, or had task-related knowledge, rather than students with high ability alone.	Leadership develops in structured and unstructured settings, so it is important to create supportive environments that give emerging leaders autonomy and flexibility.
Fuller et al. (2017), The United States	27 Black scholar-athletes nominated by the athletic department of their universities	1 semistructured interview; 1 follow-up interview for member checking	Leadership evolved from decision-making roles in high school extracurricular activities to prosocial civic engagement in college.	Leaders must personally value ideas they support in their roles, so experiential learning in phases may give emerging leaders opportunities to integrate new learning into a leader identity.
Halsall and Forneris (2018), Canada	12 Community mentors and 10 adolescents in the Right to Play Youth Leadership Program for First Nation, Metís, and Inuit youth in Canada	Semistructured interviews conducted across 5 community mentor trainings and one youth symposium	Community mentors took an incremental approach to preparing youth participants for community engagement projects (e.g., learn skills, apply them, adapt, learn more complex skills, etc.).	Leader development relies on mutually productive relationships between mentors, participants, and community organizations.
Hébert (2019), The United States	1 Male; 15-year longitudinal study to identify factors that influenced the development of exceptional leadership talent	Interviews, observations, document review, and artifact analysis	Family support, emotional intelligence, practical intelligence, and internal motivation were key factors in L. J.'s leadership development trajectory (e.g., college, graduate study, early career, military leadership).	Practical intelligence (i.e., evaluating a situation and adapting), self-beliefs, and sustained motivation over time were important for continued leadership talent development.
Hilliard et al. (2019), The United States and Canada	Cross-cultural sample of 78 male and 27 female youth sports coaches	Open-ended survey questions related to coaching ideology (e.g., mastery climate, psychosocial skills, citizenship)	Coaches created mastery environments (e.g., valued effort, viewed mistakes as learning opportunities) and adapted their approaches for individual players as psychosocial skills emerged.	Sports participation alone does not develop leadership talent or psychosocial skills, so targeted instruction and opportunities for skills application should be differentiated for individual participant needs.

(continued)

Table 1. (continued)

Author (year), country	Sample and context	Data collected	Results/findings	Implications
Howley et al. (2012), The United States	20 Students and 8 faculty in an honors program for teacher education students at Ohio University	Students and faculty completed a survey and/or participated in semistructured interviews	Inquiry-based learning allowed participants to develop intellectual leadership skills (e.g., autonomy, creativity, evidence-based practice) for school settings.	Developing the skills to lead in a professional domain requires a balance of rigor, relevance, inquiry, and practical preparation.
Jones-Morales and Konrad (2018), Barbados, Trinidad, Tobago, and Jamaica	39 Male and 39 female elite business leaders in Caribbean countries	In-depth interviews used to create a model of factors in adolescence and emerging adulthood that supported eventual leadership role attainment	Talent identification and developmentally appropriate mentoring supported the development of values, psychosocial skills, and leader identity.	Early talent recognition, development opportunities, and relational capital (e.g., mentorship) were key components for building leadership capacity in adolescence and emerging adulthood.
Kagay et al. (2015), The United States	24 Members and officers across two FFA chapters in Missouri	Questionnaire, 8 semistructured focus groups (2 female member, 2 female officer, 2 male member, 2 male officer focus groups), and field observations	Student members expressed fixed beliefs about leadership (e.g., leaders are born), but officers reported that they began to identify as leaders when sponsors/parents showed confidence in them.	Initial motivation to lead required affiliation and achievement. Sustained motivation to lead required support from mentors/peers and participant commitment.
Langram (1997), The United States	44 African American, Filipino, and Hispanic students in the final year (eighth grade) of a 3-year high school preparatory program	Questionnaires; individual interviews ($n = 24$) with students who attended all 3 years	In this sample, gender differences emerged, with females describing leadership as a way to be recognized by others and males describing it as a way to help others and work toward personal improvement.	Leadership aspirations were related to internalizing a collaborative school culture and a sense of responsibility for contributing to and maintaining the positive, supportive aspects of that culture.
Lee et al. (2008), The United States	230 Gifted adolescents at two Civic Leadership Institute (CLI) service-learning program sites	Student program survey open-ended responses from the first 2 years of the program	Students reported increased interest in civic issues/engagement, but only 2.4% of student comments indicated perceived leadership development benefits from the program.	Teaching leadership skills in the context of service learning can help adolescents identify interests and make choices about further talent development trajectories.
Mitra et al. (2010), The United States	6-Person student–advisor teams from 6 high schools; 4-day Leadership Institute; schools plan follow-up projects	Observations (institute, follow-up site visits), student and advisor focus groups, staff interviews, student preconference surveys	First-time institute participants reported learning/project planning time were beneficial. Teams with prior leadership training reported that learning time did not support their projects/extend their skills.	One-size-fits-all leadership development approaches were not effective for all groups. Differentiation/acceleration options could better serve team needs (e.g., catalyst for new teams, stability for established teams).

(continued)

Table 1. (continued)

Author (year), country	Sample and context	Data collected	Results/findings	Implications
Pawilen (2018), Philippines	10 Gifted Filipino adults; identified by leadership role occupancy and professional accomplishments	Semistructured interview	Participants cited positive family relationships as a critical factor that helped them develop self-esteem, social competence, and intellectual ability early in life.	Families with all levels of economic resources can provide support and psychosocial skills coaching to aid in a child's academic and leadership talent development.
Preus et al. (2016), The United States	13 High school students and 2 advisors in the Youth for Tomorrow justice-oriented citizenship club in one school district	Survey, interviews, observations, and social media content analysis	Members perceived that peer engagement in the club was related to personal invitations from members, adult role model involvement, personal values, and available time.	Students need a sense of purpose (i.e., voice, specific goals) in a leadership role. School climate is related to program effectiveness and levels of student engagement.
Schilling et al. (2007), The United States	12 Adolescents who facilitated small groups for younger participants in Youth Leader Corps (YLC) physical activity programs	1 Semistructured interview	Group leaders reported that their commitment to YLC was related to the quality of relationships with others in the program and their confidence in role-modeling lifestyle choices and social interactions.	Leadership development programs must address the developmental and contextual needs of participants and provide a vision for the future.
Whittington et al. (2017), The United States	131 Women who attended all-female camps in their youth	Online survey with open-ended questions related to the all-female camp experience	Women reported that at camp they developed social skills (e.g., acceptance of differences) and an openness to new experiences (e.g., sense of adventure) that was influential in shaping their career choices and their leader identity.	Female leadership development was enhanced by supportive relationships, limited distractions (e.g., less emphasis on appearance), and opportunities to try a wide range of new things.

Note. EQI = BarOn Emotional Quotient Inventory: Youth Version, Short Form; CRS = Civic Responsibility Survey; DIT-2 = Defining Issues Test-2; EAS = Emotional Autonomy Scale; ITIPS-C = Implicit Theories of Intelligence and Personality Scale for Children; ICCS = Interpersonal Communication Competence Scale; MLQ = Multifactor Leadership Questionnaire Form 6S; PSI = Parenting Style Index; RRSL = Roets Rating Scale for Leadership; SPPSC = Self-Perceived Public Speaking Competency Scale; SPSI = Social Problem-Solving Inventory; SAQ = Strategy and Attribution Questionnaire; WKT = Wallach–Kogan Divergent Thinking Test; ABL = Adolescent Behavior List; CISS = Campbell Interests and Skills Survey; Education Longitudinal Study of 2002 = ELS (2004); GPA = Grade Point Average; HPS = Helicopter Parenting Scale; LGD = Leaderless Group Discussion; MBTI = Meyers–Briggs Type Indicator; MSCS = Miner Sentence Completion Scale; NCES = National Center for Education Statistics; NELS (1992) = National Education Longitudinal Study of 1988; NLS (1972) = National Longitudinal Study of the High School Class of 1972; NSDS = New Social Desirability Scale; NSSE = National Survey of Student Engagement; RCP = The Revised Class Play; RRSL = Roets Rating Scale for Leadership; RSES = Rosenberg Self-Esteem Scale; SPW = Ryff's Scales of Psychological Well-being; SES = Wabash National Study of Liberal Arts Education Student Experiences Study; WCA = Well-being Competency Assessment; AAI = Activities and Accomplishments Inventory: College II; Duke TIP = Duke Talent Identification Program; SMPY = Study of Mathematically Precocious Youth; YES = Youth Experience Survey; GERI = Gifted Education Resource Institute at Purdue University.

Table 2. Leadership Definition and Operationalization Codes.

	Descriptive codes			
	A priori categories			Emergent categories
Author (year)	Social codes	Developmental codes	Contextual codes	Codes
Archard (2013)	GP, O-O	DSS, PSS	SCS	
Bernstein et al. (2019)				LRO
Bush et al. (2019)		A, DSS, PSS		
Carruthers and Busser (2000)	O-O			
Chan (2003)		PSS	GOAL	
L. Coffey and Davis (2019)		PSS		
A. Coffey and Lavery (2018)	O-O	DSS, PSS, TIME		
Conner and Strobel (2007)	GP, O-O	A, PSS	AAS	
Eva and Sendjaya (2012)	O-O, SI	PSS	ACC	
Feldhusen and Kennedy (1988)		DSS	SCS	IT
Fuller et al. (2017)		TIME	AAS	LRO
Gassman et al. (2014)		DSS, PSS		
Guest (2018)				LRO
Halsall and Forneris (2018)	O-O, SI	A, PSS	AAS	
Hartzell and Hong (2016)				LRO
Hébert (2019)		DSS, TIME	AAS	
Henderson et al. (2007)				IT, LRO
Hilliard et al. (2019)	O-O	DSS, PSS		
Howley et al. (2012)	O-O	PSS	AAS	
Jones-Morales and Konrad (2018)				LRO
Kagay et al. (2015)	SI	DSS, PSS	GOAL	
Kell et al. (2013)				LRO
Kudo et al. (2012)	GP, O-O, SI			
Langram (1997)	SI	DSS, PSS	GOAL	
Lee and Olszewski-Kubilius (2006)	SI	A	AAS	IT
Lee et al. (2007)	SI	A	AAS, GOAL	
Lee et al. (2008)	O-O			
Liu et al. (2019)		PSS, TIME	SCS	
Lucas and Goodman (2015)		TIME	AAS, GOAL	
Makel et al. (2016)				LRO
Mitra et al. (2010)	GP	PSS	ACC	
Pawilen (2018)				LRO
Preus et al. (2016)	O-O			
Salisbury et al. (2012)	GP, O-O, SI			
Schilling et al. (2007)	SI	PSS		
Schneider et al. (1999)		A, DSS, PSS		IT
Weinberger (2014)				LRO
Whittington et al. (2017)		DSS, PSS, TIME		

Note. Social elements of leadership codes: GP = group process; O-O = other-oriented; SI = social influence. Developmental elements of leadership codes: A = ability; DSS = domain-specific skills; PSS = psychosocial skills; TIME = over time. Contextual elements of leadership codes: ACC = accountability; AAS = authentic application of skills; GOAL = goal achievement; SCS = socially/culturally situated. Emergent leadership codes: IT = individual traits; LRO = leadership role occupancy.

Sendjaya, 2012); Canada (n = 1; Halsall & Forneris, 2018); China (n = 2; Chan, 2003; Liu et al., 2019); the Philippines (n = 1; Pawilen, 2018); and cross-cultural samples from Australia, New Zealand, South Africa, and the United Kingdom (n = 1; Archard, 2013); Barbados, Jamaica, Trinidad, and Tobago (n = 1; Jones-Morales & Konrad, 2018); and Canada and the United States (n = 1; Hilliard et al., 2019).

Settings. Within those geographic locations, the included articles covered several distinct settings. University-based contexts were the focus of 28.9% of the articles in the review (n = 11), with three focusing on undergraduate courses (Howley et al., 2012; Lucas & Goodman, 2015; Salisbury et al., 2012), three on university-based extracurricular activities (L. Coffey & Davis, 2019; Fuller et al., 2017; Gassman

Table 3. Thematic Analysis Coding for Leadership Talent Development Recommendations.

Descriptive codes	Categories	Themes
Psychosocial skills Domain-specific skills Ability General context Opportunity	Interactions	Leadership talent develops through the interaction between ability, psychosocial skill development, domain-specific skill development, context, and opportunity.
Authentic leadership situations Leadership experiences Skills adaptation Development over time	Application	Leadership talent develops when skills (i.e., psychosocial, domain-specific) are applied to authentic leadership situations and adapted through experiences over time.
Environmental influences Social influences Cultural influences Talent development trajectory	Context	Leadership development is socially and culturally situated, so context (i.e., school climate, availability of mentors, cultural acceptance) shapes leadership talent development trajectories.
Autonomous/experiential learning Collaborative learning Directed learning Feedback Accountability	Balanced learning Adaptation	Adolescent/emerging adult leadership talent development requires a balance of experiential learning in authentic leadership situations, direct instruction from teachers or coaches or mentors, and adaptation.

et al., 2014), and five on adolescent summer residential programs (Chan, 2003; Feldhusen & Kennedy, 1988; Lee et al., 2007, 2008; Lee & Olszewski-Kubilius, 2006). Secondary school-based contexts were explored in 31.6% ($n = 12$) of the studies with four studies focused on leadership curriculum (Archard, 2013; Eva & Sendjaya, 2012; Langram, 1997; Schneider et al., 1999) and eight that examined leadership in extracurricular activities (Bush et al., 2019; A. Coffey & Lavery, 2018; Guest, 2018; Hartzell & Hong, 2016; Kagay et al., 2015; Mitra et al., 2010; Preus et al., 2016; Weinberger, 2014). Community-based contexts were the focus of 21.1% of the studies ($n = 8$), with four examining after school programs (Carruthers & Busser, 2000; Conner & Strobel, 2007; Halsall & Forneris, 2018; Schilling et al., 2007), two looking at extracurricular activities (Hilliard et al., 2019; Kudo et al., 2012), and two focusing on summer residential camps (Henderson et al., 2007; Whittington et al., 2017). Home-based contexts were examined in 7.9% of the studies ($n = 3$; Jones-Morales & Konrad, 2018; Liu et al., 2019; Pawilen, 2018) and adult professional contexts were the focus of 7.9% of the studies ($n = 3$; Bernstein et al., 2019; Kell et al., 2013; Makel et al., 2016). One study, representing 2.6% of the sample, focused on the leadership development of a single individual across time (Hébert, 2019). Two of the studies that examined school-based extracurricular activities (Hartzell & Hong, 2016; Weinberger, 2014), one that focused on summer residential camp settings (Whittington et al., 2017), and three that addressed adult professional contexts (Bernstein et al., 2019; Kell et al., 2013; Makel et al., 2016) also had longitudinal or retrospective study designs.

Programs. Of the 38 studies, 8 (21.1%) examined programs focused primarily on leadership development. Seven of those studies focused on leadership programs for all students (Bush et al., 2019; Conner & Strobel, 2007; Halsall & Forneris, 2018; Lucas & Goodman, 2015; Mitra et al., 2010; Schilling et al., 2007; Schneider et al., 1999) and one study examined a leadership program for students identified as gifted or academically advanced (Chan, 2003). Nearly half of the studies (47.4%; $n = 18$) examined programs that had leadership as one component, but not the sole focus. Thirteen of these programs were open to all students (Archard, 2013; Carruthers & Busser, 2000; A. Coffey & Lavery, 2018; L. Coffey & Davis, 2019; Eva & Sendjaya, 2012; Gassman et al., 2014; Guest, 2018; Henderson et al., 2007; Hilliard et al., 2019; Kagay et al., 2015; Langram, 1997; Preus et al., 2016; Whittington et al., 2017) and five were for students identified as gifted or academically advanced (Feldhusen & Kennedy, 1988; Howley et al., 2012; Lee et al., 2007, 2008; Lee & Olszewski-Kubilius, 2006). Rather than focusing on a specific program for leadership talent development, eight of the studies (21.1%) examined adult educational and professional outcomes. Four of these studies focused on participants who were identified as gifted or academically advanced in adolescence or emerging adulthood (Bernstein et al., 2019; Hébert, 2019; Kell et al., 2013; Makel et al., 2016), two identified participants as gifted based on adult professional leadership (Jones-Morales & Konrad, 2018; Pawilen, 2018), and two focused on other factors, including enrollment in a master's program (Hartzell & Hong, 2016) and adult earnings (Weinberger, 2014). The remaining four studies (10.5%) highlighted other variables the authors hypothesized were related to leadership, including parenting style (Kudo et al., 2012; Liu et al., 2019), participation in college athletics (Fuller et al., 2017), and employment during the first year of college (Salisbury et al., 2012).

Defining and Operationalizing Leadership

The general focus of each of the articles in this systematic review was adolescent or emerging adult leadership development, but definitions of leadership varied widely. In several cases ($n = 9$), leadership was not explicitly defined, but was clearly operationalized. Matthews' (2004) three elements of youth leadership (social, developmental, and contextual) provided a framework for organizing the components of leadership from the definitions in the articles, but two additional categories (individual traits, leadership role occupancy) emerged in the content analysis process (Elo & Kyngäs, 2008; Schreier, 2012).

Social Elements of Leadership

Group process. Five of the studies defined leadership in terms of understanding and working with group dynamics (Archard, 2013; Conner & Strobel, 2007; Kudo et al., 2012; Mitra et al., 2010; Salisbury et al., 2012). Leadership in a domain rarely involves one person working alone to accomplish a goal, but working with a group can create conflicts. Authors of four of the articles (Archard, 2013; Conner & Strobel, 2007; Mitra et al., 2010; Salisbury et al., 2012) emphasized that it is important to help adolescents and emerging adults develop the psychological and social skills to navigate those inevitable collaboration conflicts. In the Kudo et al. (2012) sample of adolescents enrolled in Boys Scouts, authoritative (i.e., high expectations, high support) and autonomy granting parenting were positively related to the development of mastery beliefs. Mastery beliefs, or the sense that one can control their actions and work toward positive outcomes, can "foster personal responsibility," particularly when young people have practice "completing tasks and challenges" without parental intervention (Kudo et al., 2012, p. 367). Adolescents and young adults may be better able to work with group dynamics if they have had opportunities to learn from past experiences and if they believe they can contribute to the success of group efforts. Archard (2013) interviewed school personnel and student leaders in secondary schools to gauge perceptions of how girls and their teachers felt school-based leadership development experiences were preparing them for postsecondary leadership opportunities. Students reported that they understood the value of failure in leadership development, but the staff noted that many girls in their schools did not embrace a leader identity or take on leadership roles because they were reluctant to make mistakes in front of their peers. Opportunities for social interactions in the pursuit of a common goal can help adolescents and young adults develop leadership competencies, but young people have to accept those opportunities (Subotnik et al., 2011) and persevere through the inherent social conflicts (Archard, 2013; Ridell, 2017).

Other-oriented service. Many conceptions of leadership were focused on service to others. Twelve of the studies in this review equated leadership with service (Archard, 2013; Carruthers & Busser, 2000; A. Coffey & Lavery, 2018; Conner & Strobel, 2007; Eva & Sendjaya, 2012; Halsall & Forneris, 2018; Hilliard et al., 2019; Howley et al., 2012; Kudo et al., 2012; Lee et al., 2008; Preus et al., 2016; Salisbury et al., 2012). As part of the Civic Leadership Institute (Lee et al., 2008), high-ability adolescents in a summer residential program participated in field experiences where they applied new learning to service in the community. In open-ended survey responses, the majority of participants reported that they were interested in further service-learning opportunities and several indicated that through Civic Leadership Institute they "gained a sense of duty and responsibility to lead" and felt "more ready to take on a leadership role" at home (Lee et al., 2008, p. 298). In an ideal world, all parties' contributions (e.g., students, adult sponsors, community organizations) in a service relationship would be valued; however, this was often an area of conflict in some of the service-learning arrangements. In a Leadership and Positive Organizations course, undergraduate students were paired with a university department for the semester to engage in project-based learning focused on the functioning of the department and the well-being of the employees. The course instructors "provided detailed communications to clients at the onset of the student project" but reflected that "subsequent meetings and correspondence could have improved the quality of the overall experience for both students and clients" (Lucas & Goodman, 2015, p. 148). Two authors (Lee et al., 2008; Preus et al., 2016) suggested that in order to preserve the motivation to lead in service and civic engagement contexts, working relationships between emerging leaders and the organizations they serve should be negotiated in advance and monitored throughout the service commitment to ensure that they are mutually beneficial.

Social influence. Nine of the studies defined leadership in terms of exercising social influence (Eva & Sendjaya, 2012; Halsall & Forneris, 2018; Kagay et al., 2015; Kudo et al., 2012; Langram, 1997; Lee et al., 2007; Lee & Olszewski-Kubilius, 2006; Salisbury et al., 2012; Schilling et al., 2007). Lee and Olszewski-Kubilius (2006) investigated the connection between emotional intelligence, moral development, and leadership in a sample of gifted high school students in two summer residential enrichment programs. One finding in the study was that "higher levels of moral reasoning or emotional intelligence were not associated with higher levels of leadership" (Lee & Olszewski-Kubilius, 2006, pp. 59-60). The authors noted their concern that "advanced cognitive reasoning abilities may help an individual understand the nuances of a moral dilemma" but "they do not propel gifted students to take the right actions" (Lee & Olszewski-Kubilius, 2006, p. 60), which highlighted the fact that leadership can be exerted to negative effect. On the other hand, to exert positive leadership, individuals needed to be able to

convince others to believe in a vision and to work with them to accomplish a goal. First Nation, Métis, and Inuit youth involved in a community-based leadership development program in Canada (Halsall & Forneris, 2018) advocated for community projects that were personally meaningful to them (e.g., fundraisers, cultural events). Once participants communicated their vision and gathered supporters, the program sponsors helped with the planning and implementation of the projects. Strong leadership development programs addressed the developmental and contextual needs of participants, and in turn, participants learned how to develop a vision, communicate that vision to others, and recruit individuals willing to help them accomplish that vision (Eva & Sendjaya, 2012; Schilling et al., 2007).

Developmental Elements of Leadership

Ability. Six of the studies defined leadership in terms of ability or competence (Bush et al., 2019; Conner & Strobel, 2007; Halsall & Forneris, 2018; Lee et al., 2007; Lee & Olszewski-Kubilius, 2006; Schneider et al., 1999). These definitions suggested that an individual's abilities or competencies equipped them to lead others. For students in the Study of Mathematically Precocious Youth (SMPY), early identification of intellectual strengths (e.g., math, verbal) and interests guided academic talent development and predicted career trajectories and adult professional achievements. However, ability alone was not sufficient to predict eminent adult professional and creative contributions. Educational adaptations (e.g., acceleration, ability-grouping), psychosocial skills coaching (e.g., accepting, responding to, and incorporating critical feedback), and other factors (e.g., commitment, opportunity), were needed for high-ability adolescents to engage in talent domains and progress to the highest levels of professional leadership (Bernstein et al., 2019; Kell et al., 2013; Makel et al., 2016). Schneider et al. (1999) noted that performance in leadership roles over time requires noncognitive factors, such as interest and sustained motivation, and that typical classroom performance may be a better predictor of adolescent leadership development potential than maximal performance on one-time assessments or performance tasks (e.g., standardized tests, Leaderless Group Discussions). These findings suggest that ability is one facet of leadership that can be developed, but it must be supported by the concurrent development of domain-specific and psychosocial skills.

Domain-specific skills. Definitions in 10 of the studies acknowledged that competent leaders should be knowledgeable about the domain in which they lead (Archard, 2013; Bush et al., 2019; A. Coffey & Lavery, 2018; Feldhusen & Kennedy, 1988; Gassman et al., 2014; Hébert, 2019; Hilliard et al., 2019; Kagay et al., 2015; Langram, 1997; Schneider et al., 1999). Educational leaders (e.g., principals) in Australian middle schools suggested that leader development opportunities should be age appropriate and systematically add to the individual's domain-specific knowledge through formal (e.g., head boy, head girl) and informal roles (e.g., class discussion leaders; A. Coffey & Lavery, 2018). Undergraduate students who were active members of the Nonprofit Leadership Alliance Student Association had opportunities to learn career-relevant skills, such as grant writing and fundraising techniques, through workshops and internships that prepared them for employment in nonprofit jobs (Gassman et al., 2014). For students enrolled in master's degree programs in the arts, education, and STEM (science, technology, engineering, and math), high school extracurricular participation and leadership provided opportunities for increasing domain knowledge, for exercising creativity within the domain, and for making decisions about postsecondary paths (Hartzell & Hong, 2016).

Psychosocial skills. Eighteen of the studies included psychosocial skills in definitions of leadership (Archard, 2013; Bush et al., 2019; Chan, 2003; A. Coffey & Lavery, 2018; L. Coffey & Davis, 2019; Conner & Strobel, 2007; Eva & Sendjaya, 2012; Gassman et al., 2014; Halsall & Forneris, 2018; Hilliard et al., 2019; Howley et al., 2012; Kagay et al., 2015; Langram, 1997; Liu et al., 2019; Mitra et al., 2010; Schilling et al., 2007; Schneider et al., 1999; Whittington et al., 2017). Psychosocial skills are psychological, social, and emotional skills, such as motivation and self-beliefs, that enable individuals to persist as talent development trajectories become more complex (Rinn, 2020; Subotnik et al., 2011). Scholars have suggested that to support talent development processes, "psychosocial skills must be actively and deliberately cultivated via programming, counseling, and mentoring of students" (Subotnik, 2015, p. 46). In the Creative Leadership Training Program (Chan, 2003), participants received instruction in communication, creative thinking, problem-solving, leadership, group dynamics, and organizing school activities. The 6-week program provided students with psychosocial skills coaching that was intended to be "further reinforced by a practicum component" as students engaged in "leadership roles in student activities in their respective schools" the following year (Chan, 2003, p. 167). In a sample of junior high students in China, Liu et al. (2019) identified self-esteem and leader self-efficacy as mediating factors in the emergence of adolescent leadership talent, measured by ratings (i.e., peer, teacher, and parent) and class leadership role occupancy. For leadership in specific domains, the psychosocial skills the authors identified varied, but across domains, skills such as interpersonal communication, problem solving, self-assessment, and self-efficacy have been identified as key skills for individuals in leadership roles (Chan, 2003; Liu et al., 2019; Matthews, 2004; Renzulli, 2012).

Time. Only six studies defined leadership in terms of development over time (A. Coffey & Lavery, 2018; Fuller et al., 2017; Hébert, 2019; Liu et al., 2019; Lucas & Goodman,

2015; Whittington et al., 2017), but there were some indications that extended time in a domain and adaptation to that domain were salient factors in developing leadership talent. In the Youth Engaged in Leadership and Learning program (Conner & Strobel, 2007), two girls participated in the program as eighth graders and came back as leaders in ninth and 10th grades. Over time, each girl was able to find a leadership style within the organization that fit her strengths. Where one girl was vocal and helped drive change within the program, the other girl was less visible, but strategically supported the behind-the-scenes processes that kept the organization running. There were indications that leadership can develop early, but the process takes time. In one study (L. Coffey & Davis, 2019), the scholar-athletes in the sample credited athletic participation from childhood through emerging adulthood, over and above school coursework, with helping them develop leadership skills that were also marketable professional workplace competencies (e.g., collaboration, multitasking). Undergraduate participants in a semester-long organizational leadership project reported gains in domain-specific competence and personal wellbeing, due in part to the extended duration of the applied learning experience (Lucas & Goodman, 2015). It was important for emerging leaders to develop key skills and abilities, but there were also environmental components to consider.

Contextual Elements of Leadership

Accountability. Only two of the studies defined leadership in terms of accountability (Eva & Sendjaya, 2012; Mitra et al., 2010). In real-world contexts, leaders are accountable for meeting goals and supporting those they lead. Undergraduate students who worked off-campus 20 hours per week or more during their first year of college showed increases in leadership development domains (e.g., group, community), whereas less educationally or career-relevant on-campus work showed no relationship with the development of leadership skills (Salisbury et al., 2012). The authors suggested this was due, in part, to off-campus workers' engagement in jobs that held them accountable for production or performance and required them to manage their time between employment, academic, and social commitments. Students in the Teen Excellence in Leadership Institute (TELI) for 4-H and FFA students attended 1 weekend session where they learned foundational skills and leadership competencies (Bush et al., 2019). Next, they planned and implemented a group project with a mentor and other students from their home program to apply the skills they learned. These group projects were scaffolded with direct support from mentors and two virtual meetings where participants reported on their progress to TELI facilitators. Students were accountable for meeting project milestones in these virtual meetings and at a second weekend session where they reported on the final project (Bush et al., 2019). However, teachers and counselors in a summer residential program (Feldhusen & Kennedy, 1988) noted that leadership behaviors developed in structured and unstructured settings. So, although accountability is important, emerging leaders in talent development programs may benefit from some informal social interactions without strict accountability for meeting goals or completing tasks.

Authentic application of skills. Eight of the articles defined leadership in terms of application in a real-world context (Conner & Strobel, 2007; Fuller et al., 2017; Halsall & Forneris, 2018; Hébert, 2019; Howley et al., 2012; Langram, 1997; Lee & Olszewski-Kubilius, 2006; Lucas & Goodman, 2015). Skill development (e.g., domain-specific, psychosocial) should be supported with practice in formal and informal contexts. In a cross-cultural sample of staff and students in all-female schools and women who held professional leadership roles (Archard, 2013), role modeling and mentoring were identified as critical elements in the development of a female leader identity. However, the all-female school settings differed from the reality of the typical professional workplace, so it was recommended that students in single-gender school environments have more exposure to authentic scenarios in the larger community. Real-world leadership requires individuals to fulfill responsibilities and actively work toward the goals of the organization. When adolescent participants in the Youth Leader Corps were given leadership responsibilities in the organization, such as leading small groups and planning lessons for younger participants, that practice applying the leadership lessons they were learning also translated into higher levels of commitment to the program and a sense of responsibility for training the next group of future leaders (Schilling et al., 2007). Practicing leadership skills in real contexts was a valuable experience that emerging leaders needed to critically evaluate their performance and adapt. However, adolescent and emerging adult learners also expressed a need for time to process new information and assimilate new skills before applying them. In an examination of student and staff perceptions of secondary leadership programming, Eva and Sendjaya (2012) noted that "students require the space and time to think and discuss critically, thoroughly, and systematically" so that they "understand the implications of their actions" (p. 594) at home, in the community, and in their future workplaces.

Socially and culturally situated. Three of the studies defined leadership by noting that every context is influenced by social and cultural factors (Archard, 2013; Feldhusen & Kennedy, 1988; Liu et al., 2019). These environmental and sociocultural factors (e.g., opportunities, obstacles, values, and resources) were related to leadership development trajectories (Dai, 2017). Women who attended all-female summer residential camps in childhood and adolescence reported that the camp environment allowed them to focus on personal development, to negotiate social situations, and to try challenging new activities without the conflict of also navigating socially imposed gender norms. These women reported that the social and psychosocial skills they learned through camp

experiences helped prepare them for leadership roles in challenging and traditionally male-dominated careers (e.g., engineer, diplomat; Whittington et al., 2017). In the Right to Play Youth Leadership Program (Halsall & Forneris, 2018), part of planning for community events (e.g., BINGO fundraiser, community pow-wow) included helping student participants examine community norms and proactively plan the events with these social and cultural contexts in mind. Context can shape leader development trajectories, but it was also important for emerging leaders to learn to evaluate social and cultural context when creating plans and making decisions.

Goal-directed. Five of the studies defined leadership in terms of achieving a specific goal (Chan, 2003; Kagay et al., 2015; Langram, 1997; Lee et al., 2007; Lucas & Goodman, 2015). Self-reflection and goal setting supported ongoing leadership development. High school student–advisor teams who attended a 4-day Leadership Institute set goals for school projects they would implement when they returned home from the conference. Student leaders had to formulate their ideas and convince school and community stakeholders (e.g., principals, service organizations) of the importance of the project (Mitra et al., 2010). Psychosocial skills (e.g., communication, dealing with criticism) were an important factor in whether students embraced a leader identity and persisted in the face of obstacles. Goal-focused leadership also required organizational awareness, including hierarchical structures and communication protocols. Students who participated in the Youth for Tomorrow club focused on building school and community support for justice-oriented initiatives, including school improvement funding and adding social–emotional learning programs (Preus et al., 2016). Students noted that although some of their initiatives were unsuccessful, they learned valuable lessons that helped them improve their strategies for the next challenge.

Individual Traits. Four articles (Feldhusen & Kennedy, 1988; Henderson et al., 2007; Lee & Olszewski-Kubilius, 2006; Schneider et al., 1999) mentioned individual traits (e.g., cluster of traits, personality traits) in their definitions of leadership. Individual traits could be classified as social or developmental, but they were classified under emergent categories because they revealed a notable trend about definitions of leadership in the data. There was a clear shift away from conceptualizing leadership as a collection of personality traits. Among the articles in this review, no studies after 2007 mention individual traits in definitions of leadership. One article defined leadership as a "cluster of traits" (Feldhusen & Kennedy, 1988, p. 3) and another study (Schneider et al., 1999) defined it using Yukl and van Fleet's (1992) four correlates of adult workplace leadership, which include personality traits. One study (Henderson et al., 2007) did not define leadership, but operationalized the construct through survey items, such as "other kids look up to me" (p. 995). Acknowledging that although leaders may share some personality traits, these traits alone do not make one a leader, Lee and Olszewski-Kubilius (2006) defined leadership as "a multifaceted concept that involves several aspects of human abilities and traits" (p. 33). Earlier definitions of leadership focused on personality traits (e.g., Feldhusen & Kennedy, 1988; Schneider et al., 1999), but there was a clear shift away from this narrow view of the construct toward a conception of leadership as a talent domain that develops within a complex system that includes social interactions, skill development, and contextual factors (Dai, 2017; Matthews, 2004; Subotnik et al., 2011).

Leadership Role Occupancy. The second trend identified in the content analysis of leadership definitions was the lack of a definition. Instead, some studies operationalized the construct of leadership as holding a leadership role. Leadership role occupancy for adolescents (Guest, 2018; Henderson et al., 2007; Weinberger, 2014), emerging adults (Hartzell & Hong, 2016), and adult professionals (Bernstein et al., 2019; Jones-Morales & Konrad, 2018; Kell et al., 2013; Makel et al., 2016; Pawilen, 2018) was used to operationalize the construct of leadership in nine (23.7%) of the 38 studies included in this review. For example, in the Bernstein et al. (2019) sample of SMPY participants, 12.3% ($n = 83$) met the authors' definition of eminence at age 50 by holding leadership roles in adult professional domains (e.g., tenured professors, Fortune 500 executives). This trend underscored the fact that research in leadership talent development is divided between longitudinal and retrospective inquiries that examined the trajectories of individuals who actually became leaders (e.g., Bernstein et al., 2019; Jones-Morales & Konrad, 2018) and research that tried to identify factors in individuals and in development programs that might predict which individuals eventually become leaders (e.g., Chan, 2003; Kudo et al., 2012; Liu et al., 2019).

Recommendations for Leadership Talent Development From the Literature

Each of the research studies in this systematic review made specific suggestions for adolescent or emerging adult leadership talent development. These recommendations were identified in each study and compared across studies to capture themes about research-based practices for leadership talent development with adolescents and emerging adults. Four themes were developed from the recommendations in the articles.

Interactions. The first theme was that *leadership talent develops through the interaction between ability, psychosocial skill development, domain-specific skill development, context, and opportunity.* Five factors contributed to leadership talent development across studies, including: (a) cognitive ability, (b) psychosocial skills, (c) domain-specific skills, (d) context, and (e) opportunity. In a sample of high-ability students in a

summer residential program (Lee & Olszewski-Kubilius, 2006), higher cognitive ability was negatively correlated with leadership. This finding indicated that although gifted and academically talented individuals may have the potential to develop leadership talent, that talent did not develop on its own and these individuals still needed coaching in areas such as self-regulation and interpersonal communication for that potential to develop into competent leadership (Lee & Olszewski-Kubilius, 2006). Elite business leaders in four Caribbean countries noted that psychosocial skills development in the home during childhood, early talent identification in adolescence, and educational adaptations (e.g., acceleration, ability grouping) were instrumental in preparing them to handle the rigors of adult professional leadership roles (Jones-Morales & Konrad, 2018).

The role of opportunity was notably absent in the definitions of leadership, but it was a recurring theme in author recommendations. For the individual in Hébert's (2019) longitudinal single case study, L. J.'s leadership ability emerged early, was systematically strengthened in adolescence and emerging adulthood, and was applied and adapted throughout his graduate education, early career, and later career specialization. L. J.'s talent for learning languages, his leadership skills, and his openness to new experiences gave him the opportunity to serve in the United States Navy as a Naval Special Warfare officer (Hébert, 2019). Academic ability did explain some of the variance in teacher ratings of leadership ability for students enrolled in a high school leadership course, but interactions between ability and nonacademic variables, such as motivation, also explained a notable amount of variance (Schneider et al., 1999). The findings of longitudinal studies (e.g., SMPY; Bernstein et al., 2019; Kell et al., 2013; Makel et al., 2016) and the work of talent development scholars (Dai, 2017, Subotnik et al., 2011) have stressed that ability alone is not sufficient to predict adult professional leadership or eminent creative contributions in a domain. Taken together, these findings suggested that there is not just one factor responsible for leadership talent development and multiple factors, including opportunity, context, skills development (e.g., domain-specific, psychosocial), and ability, should be considered when creating leadership development programs and identifying students for leadership programming.

Application. The second theme derived from the recommendations in the articles is that *leadership talent develops when skills (i.e., psychosocial skills, domain-specific skills) are applied to authentic leadership situations and adapted through experiences over time.* Three elements of applied leadership were identified across the articles in the systematic review: (a) authentic situations, (b) lived experiences, and (c) adaptation. For undergraduate students in an honors program for teacher education, the rigor of the research they conducted with faculty members, combined with the application of that research in educational contexts helped students engage with the curriculum and gain some understanding of the leadership skills required for careers in education (Howley et al., 2012). Mentoring and modeling components, such as explicit training in process-based collaboration, were vital parts of leadership development programs (Archard, 2013; Bush et al., 2019; Eva & Sendjaya, 2012; Lee et al., 2008).

After initial participation in an organization, students with personal mastery goals may commit to roles in organizational leadership. Members of a college learning organization for students pursuing careers in nonprofit leadership felt they benefited from applying leadership skills in their work with local nonprofit organizations, learning from their mistakes and adapting, and leading within the organization (Gassman et al., 2014). Student leaders in the Boys and Girls Clubs valued intentional dialogue with sponsors to think through leadership skills and real-world applications. Knowing how they might use the leadership skills they were developing in their future education and career pursuits gave the student leaders a sense of purpose as members of the organization and in their leadership roles (Carruthers & Busser, 2000). Teams who attended the Leadership Institute (Mitra et al., 2010) and the TELI (Bush et al., 2019) planned projects to take back to their schools. Although students had support from their sponsors and were responsible for reporting back to institute organizers on their progress, the students who led these projects were ultimately accountable for the success or failure of their initiatives, which required adaptation and persistence.

Context. The third theme that emerged from the recommendations in the studies is that *leadership is socially and culturally situated, so context (i.e., school climate, availability of teachers/coaches/mentors, cultural acceptance) is an important factor that shapes leadership talent development trajectories.* Across all of the articles in the systematic review, a few key points stood out about context: (a) talent development trajectories differ by domain, (b) leadership is a talent that needs to be applied in a domain, (c) every domain has contextual factors that matter, and (d) those contextual factors support talent development or cause it to stall. Dai (2017) differentiates between "environmental press," the opportunities or challenges in the context that shape talent trajectories, and "socio-cultural mediation," the resources and tools in the context that sustain the talent development process (p. 176). In the Kudo et al. (2012) sample of Boy Scouts, there was some indication that having nurturing and involved parents supported the development of mastery orientation, emotional autonomy, and leadership skills from an early age. On the other hand, "overparenting" (i.e., helicopter parenting) was related to lower self-esteem and lower leader self-efficacy in adolescents, and therefore, was negatively related to the emergence of leadership skills (Liu et al., 2019, p. 1227). Taken together, these two studies indicate that home environments during childhood and adolescence can positively shape talent development trajectories.

As individuals get older and spend more time at school and in extracurricular activities, these contexts also shape talent development. For students in a high school preparatory program, leadership aspirations were related to internalizing the collaborative school culture. Girls in this sample emphasized taking on leadership roles to gain recognition, whereas boys perceived that leading would facilitate personal growth and allow them to contribute to the supportive culture they perceived among their teachers and peers (Langram, 1997). In several school-based leadership programs, the school climate was also related to participation and program effectiveness. In a comparison of two high schools with different levels of economic resources (Guest, 2018), the authors noted that extracurricular sponsors and coaches in the more affluent school emphasized student responsibility to contribute to the larger community (i.e., asset focused), whereas the adults in the other school frequently referred to limitations (i.e., deficit focused). However, when students had a sense of purpose, a voice in school or program decisions, and supportive adults, they learned to work within the existing environment to create innovative solutions to relevant issues (Preus et al., 2016). In a postsecondary study, scholar–athletes, identified by the university athletic staff as campus leaders, chose to spend their very limited free time by investing in leadership roles that aligned with their sense of purpose and desire for positive change in the community (e.g., fraternities, faith-based organizations; Fuller et al., 2017). Reciprocal relationships that are personally meaningful to leaders and the organizations they serve may play a key role in leadership persistence.

Balanced Learning and Adaptation. The fourth theme across the studies was that *adolescent and emerging adult leadership talent development requires a balance of experiential learning in authentic leadership situations, direct instruction from teachers or coaches or mentors, and adaptation.* A strong theme across the articles was that leadership talent development requires a balance of: (a) experiential learning, (b) direct instruction, and (c) adaptation as a result of new learning. In one study (Henderson et al., 2007), summer camp participants tried challenging new activities, such as rock climbing and kayaking. Parents reported that these learning experiences were related to gains in their childrens' social skills, self-confidence, and leadership ability. However, it is unclear if leadership was addressed through direct instruction in these camp settings and if so, which specific leadership competencies were targeted for development. It is clear that practicing leadership skills in authentic situations, such as service-learning (Lee et al., 2008) and school-based activism (Preus et al., 2016) was a powerful learning experience for emerging leaders because it gave them opportunities to learn from successes and mistakes and adapt. One-size-fits-all leadership development approaches were unable to meet the needs of all students, particularly those who had prior leadership experience and required differentiated or accelerated instruction or more advanced application opportunities. The needs of collaborative groups at a Leadership Institute who were creating project to take back to their schools differed widely. Some high school groups needed their leaders to provide a "spark" or catalyst, other groups needed "stability" to sustain the motivation to reach project goals (Mitra et al., 2010, p. 113). This example underscored the fact that experiential learning alone is not sufficient for leader development. That learning must be paired with direct instruction on the skills needed to lead and achieve goals, such as techniques for requesting administrative approval for school-based projects. Graduate school students in STEM, the arts (i.e., creative writing, theater), and education reported that they were already engaging in and leading in their domain of interest by high school (Hartzell & Hong, 2016), which indicated that providing a variety of early career-related opportunities for exploration and engagement can facilitate the integration of new learning, reflection, and adaptation into a clearer sense of educational and career goals for adolescents and emerging adults.

Discussion

The purpose of this study was to explore empirical research on adolescent and emerging adult leadership talent development. A systematic review of literature was conducted, which resulted in the identification of 38 articles for critical review. The analysis of research contexts, definitions, and recommendations identified some key considerations for developing leadership talent.

Environments That Support Leadership Talent Development

Early interests can be encouraged, discouraged, or redirected in the home (Jones-Morales & Konrad, 2018; Kudo et al., 2012; Liu et al., 2019; Pawilen, 2018) and identity explorations can be supported, tolerated, or ignored in the home (Dai, 2017; Luyckx et al., 2006; Subotnik et al, 2011). Home environments vary widely, but as children grow up, they interact in other influential contexts, such as school or the community. Adolescence and emerging adulthood mark periods of separation and individuation as individuals prepare to make education and career-related commitments and become independent (Meeus et al., 2005). So, although the role of the home is not completely diminished for secondary students and undergraduates, it is reduced as opportunities and resources become available outside the home. Schools and community programs have the potential to provide valuable identity and career exploration opportunities because they offer resources (e.g., mentors, programs, leadership roles) that can be instrumental in an individual's characteristic adaptation process (Dai, 2017; Subotnik et al., 2011). For individuals who chose to enroll in college, there were opportunities to develop domain-specific and psychosocial skills

and to apply those skills in leadership roles (L. Coffey & Davis, 2019; Fuller et al., 2017; Gassman et al., 2014; Hébert, 2019). However, with the rising cost of college, individuals choosing postsecondary education paths could benefit from early career exploration opportunities before they devote time and financial resources to the pursuit of a degree (e.g., Meyer et al., 2021).

The prevalence of school and community contexts in this review suggests that diverse approaches are being implemented in school settings and beyond (Bush et al., 2019; Hilliard et al., 2019; Kagay et al., 2015; Lee et al., 2007, 2008; Lee & Olszewski-Kubilius, 2006; Schneider et al., 1999). However, there was also a clear understanding in the research that school and community contexts were a source of structural inequity (e.g., financial resources, personnel) and that leadership development opportunities were not equally available to all interested individuals (Carruthers & Busser, 2000; Conner & Strobel, 2007; Guest, 2018; Halsall & Forneris, 2018; Jones-Morales & Konrad, 2018; Langram, 1997; Mitra et al., 2010; Preus et al., 2016; Schilling et al., 2007; Weinberger, 2014). Schools in general and gifted education programs in particular have limited resources, so an understanding of effective research-based practices for leadership talent development may allow schools and gifted education professionals to make informed decisions about how they allocate those resources to provide equitable and accessible leadership development opportunities. Gifted education can support academically advanced young people by providing career-related exploration opportunities in K–12 settings that allow students to identify compatible postsecondary paths (e.g., college, careers, military, blended options) and to develop the competencies they will need to engage in and lead within those domains.

Identification of Leadership Talent

Several studies in this review offered support for early identification of talent, intentional educational adaptations (e.g., ability grouping, acceleration), and accessible talent pathways for the development of leadership talent (Bernstein et al., 2019; Kell et al., 2013; Makel et al., 2016). Though these studies did not focus on any specific program for leadership development, they identified students who showed exceptional academic talent in early adolescence and tracked their adult professional accomplishments, including leadership role occupancy. It is unclear what steps these individuals took to develop leadership talent or to earn their leadership roles as adults, but it is clear that identifying ability early and providing educational adaptations can start students on the path to expertise and leadership in professional domains (Dai, 2017; Subotnik et al., 2011, 2018). Individuals hold leadership roles in organizations for a variety of reasons, including organizational politics, a lack of qualified candidates, or an individual's desire to lead (B. Brown, 2018; Sinek, 2009). Leadership role occupancy may be a suitable proxy for leadership talent in some cases, but the assumption that one has leadership talent or is an effective leader because they hold a title may not always be accurate. Furthermore, individuals leading within organizations may do so in informal capacities, making it difficult to determine how organizational functioning is related to formal versus informal leadership roles. However, the trend of operationalizing leadership through role occupancy highlighted the fact that when opportunities to lead are presented, individuals have to accept them, a factor that may be dependent on whether the individual has embraced a leader identity and strengthened the psychosocial skills (e.g., self-beliefs, motivation) required to handle the inevitable criticism that comes with leading. So, willingness to commit to leader development appears to be a vital characteristic identified in leadership research (e.g., B. Brown, 2018; Ridell, 2017), talent development scholarship (e.g., Subotnik et al., 2011), and the studies in this review (e.g., Conner & Strobel, 2007; Fuller et al., 2017).

Increasingly, leadership has been suggested as an identification criterion to increase gifted program diversity, but often, it is not an actual component of gifted programming, which can create misalignment between identification and services (Matthews, 2015; Pfeiffer & Wechsler, 2013). Leadership scales (e.g., *Roets Rating Scale for Leadership*; Roets, 1986), ratings (e.g., peer, parent, teacher; Liu et al., 2019; Schneider et al., 1999), and observations of collaboration activities (e.g., Leaderless Group Discussion; Schneider et al., 1999) were used as measures of leadership interest, potential, and ability, but other studies relied on participant perceptions and leadership role occupancy to examine the construct. Lee et al. (2020) published a study after the database search for this review was completed, but the author-developed survey that measured leadership experiences, leadership potential, and leadership motivation for adolescents may be a promising tool to use in further studies on leadership talent development. From the findings in this review, it is not clear which methods or instruments for measuring leadership facets are most effective, but it is clear that if students are identified using leadership measures, the services they are offered should include embedded leadership opportunities in a domain (Dai, 2017; Renzulli, 1978; Subotnik et al., 2011, 2018). Equitable practices for identifying students for gifted programming include evaluating students on multiple measures (e.g., typical performance and maximal performance, Schneider et al., 1999), but also allowing them to qualify for services on one criterion instead of requiring them to qualify on multiple criteria (e.g., Lakin, 2018). For states that have included leadership in definitions of giftedness, the findings of this systematic review indicate that when identifying students for leadership programs, schools should assess an individual's interest in a domain and their willingness to learn domain-specific leadership competencies. In addition, the findings suggest that leadership development

programming should include direct instruction in leadership competencies, coupled with opportunities to apply those skills and reflect on those leadership experiences.

Differentiated Leader Development Programming

Eminent professional and creative contributions are a possible outcome of talent development programs in and out of schools, but eminence depends on a complex set of factors, not the least of which is chance. Leadership talent development programs should be designed to support the possibility of future eminence in professional domains, but much about what that process could and should look like for adolescents in school-based contexts is still unclear (Dai, 2017; Subotnik et al., 2011, 2018). The need to tailor interventions for individuals increases as they move further into talent development trajectories (Dai, 2017; Rinn, 2020; Subotnik et al., 2011), so there is a need for additional research on how to effectively differentiate talent development programming for emergent leaders in school contexts and beyond. Individuals in different developmental periods have different talent development needs. Programs for early adolescents will necessarily look different than programs for college students, due in part to differences in identity exploration (characteristic adaptation) and identity commitments (maximal adaptation; Dai, 2017). Programs for younger students may have a more general focus on determining interests, identifying strengths, and developing competence (e.g., Henderson et al., 2007; Kudo et al., 2012), whereas programs for older students may be more domain-specific and focused on identity commitments, maximal adaptation, and developing expertise (e.g., Lucas & Goodman, 2015; Hartzell & Hong, 2016; Howley et al., 2012). There was a tendency in this sample of studies to operationalize leadership in terms of service (e.g., Eva & Sendjaya, 2012; Lee et al., 2008; Preus et al., 2016). Although this type of leadership may be more readily available to younger students, it is not the only type of leadership. When service leadership is offered as the only option for emerging leaders in gifted education programs, students may miss opportunities to develop other leadership competencies.

It was clear that many different types of programs helped students explore their interests (e.g., agriculture, sports, academics), but it was unclear which types of programs were more effective in developing competence in emerging leaders at different stages of development. Leadership development programs may hold talented leaders back or limit their opportunities for growth unless they include differentiation and acceleration (Hilliard et al., 2019; Mitra et al., 2010). Leadership theories stress the importance of applying leadership skills (e.g., motivating others, task completion), reflecting on the experience, and adapting in response (e.g., Saleem et al., 2020; Shakeel et al., 2019; Qian et al., 2020). Contemporary leadership definitions stress that leaders need to model and reinforce prosocial behaviors for those they lead (B. Brown, 2018; Department of the Army, 2015; Sinek, 2009). These components of leadership talent development are not compatible with one-size-fits-all programs that fail to recognize individual differences. Independent study and mentorship programs that allow adolescents to choose a career path, identify a mentor in the field, and shadow professionals while exploring the domain, may better equip adolescents and emerging adults to make career-related identity commitments and give them opportunities to see leadership skills applied in a domain (Crocetti et al., 2008; Luyckx et al., 2006; Meyer et al., 2021; Renzulli, 2012). Equitable school-based opportunities for leader development should align with student interests and use resources that are locally available (e.g., community mentors) or those that can be accessed virtually (e.g., remote mentoring). There are a variety of ways to lead, so effective leadership talent development programs should provide options, rather than narrow interpretations of the construct of leadership.

Conceptions of Leadership Talent Development

The construct of leadership talent development did not have a consistent definition in the research across all of the studies in this review, but the gifted education researchers whose studies were included (Chan, 2003; Feldhusen & Kennedy, 1988; Lee et al., 2007, 2008; Lee & Olszewski-Kubilius, 2006) defined leadership in terms of a domain of giftedness (Marland, 1972) in which skills and abilities (e.g., domain-specific, psychosocial, social) are applied in a discipline and strengthened over time. The requirements to lead as an adolescent may differ in some ways from those for emerging adult or adult professional leadership, but there are common elements (i.e., social, developmental, and contextual) that offer a framework for the discussion of leadership (Matthews, 2004). It is critical that researchers clearly define or operationalize leadership in empirical studies, so we offer a working definition of leadership talent development as a starting point for future investigations. Leadership talent development can be defined as *the process of developing and applying emergent skills (e.g., domain-specific, psychosocial, social) to positively influence others in the pursuit of a common goal and to facilitate the adaptation of the group as task parameters (e.g., the organization, the team, the goal, the time constraints) change over time.* This definition parallels conceptions of youth leadership in that it includes positive social influence, skills development, and adaptation to contextual elements (Matthews, 2004). It also aligns with conceptions of talent development in that it acknowledges that skills (e.g., domain-specific, psychosocial) and abilities are "malleable and need to be cultivated" and that opportunities must be willingly undertaken by the talented individual (Subotnik et al., 2011, p. 7). This working definition synthesizes ideas about youth leadership (Matthews, 2004), talent development (Subotnik et al., 2011), and the findings of this systematic review of literature. In order to prepare young

people for leadership at the highest levels of adult professional domains, it is imperative to continue to investigate best practices for leadership talent development.

Limitations

Although this critical review of literature on leadership talent development for adolescents and emerging adults yields important findings for researchers, practitioners, and parents, one major limitation was the small number of articles ($n = 38$). Articles may have been unintentionally excluded during the initial database search as a result of search terms, database selection, and decision rules for inclusion. The choice to examine only empirical studies streamlined the data collection process, but 120 other articles that were theoretical frameworks or informational texts were excluded. This indicates that a large portion of the scholarship on leadership talent development for adolescents and emerging adults is informational or theoretical, rather than empirical. This scarcity of empirical studies may be due to the difficulty of defining and measuring leadership, the wide variety of interpretations of leadership development, or the longitudinal nature of leader development. In the absence of a clear definition, it is much harder to know if findings can be generalized or transferred across research contexts. We offer a working definition of leadership talent development, but that definition needs to be evaluated empirically. Further, methods of measuring leadership interest, potential, and ability were identified, but there was not enough information to determine the efficacy of those measurements. However, using 38 studies published across the last three decades, this systematic review was able to highlight contexts where emergent leadership has been explored, ways that researchers define and operationalize leadership, and themes that are potentially useful for designing leadership talent development experiences.

Future Research

Secondary schools offer a wide variety of elective courses, including athletics, fine arts, language studies, career and technical education classes, and military-focused leadership development through Junior Reserve Officers' Training Corps programs. These school-based contexts provide a range of talent domains with distinct trajectories, domain-specific competencies, and psychosocial skill sets. Adolescents in high school leadership roles provide an optimal sample to investigate the intersection between identity exploration, leadership role occupancy, and commitments toward postsecondary education or careers. Future research could identify key psychosocial skills required for successful leadership in individual domains and those that might be useful across multiple domains. Another line of inquiry might be to compare specific aspects of leadership talent development trajectories in different domains, such as empirically documenting the phenomena of decision fatigue in leadership roles across domains (e.g., education, medicine, military). Empirical investigations about leadership talent development should examine contextual factors (e.g., equity, opportunity, school climate) in addition to organizational and individual factors. In particular, more research is needed to explore environmental supports for effective leadership talent development in a range of postsecondary educational contexts (e.g., college, university), for those individuals who chose to enter the workforce right after high school, and for those who committed to blended education and career training (e.g., military service; Pema & Mehay, 2009). Students may take on leadership roles in a domain for a variety of reasons, and for some individuals, this involvement is related to a leader identity, although the nature of that relationship is not clear (i.e., involvement creates leader identity or leader identity prompts involvement). So, the motivation to lead in secondary and postsecondary contexts and the mechanisms of leader engagement may also be fruitful avenues of research. Across studies in this systematic review, it was clear that leadership is a complex construct that requires the development of a leader identity and sustained motivation to lead in changing contexts. As such, adolescent and emerging leadership talent development should be researched using methods (e.g., quantitative, qualitative, mixed, longitudinal) that can capture that complexity.

Conclusion

Leadership development has long been identified as an important aspect of giftedness (Marland, 1972) and although some progress has been made toward identifying best practices for developing leadership talent in adolescents and emerging adults, there is still more work to be done. One goal of the study of leadership in high-ability students is "extending existing knowledge, rather than reinventing it" (Matthews, 2004, p. 79). Leadership skills, and the requisite accompanying psychosocial skills, must be applied in a domain. Early interests and ability patterns direct the opportunities individuals choose from those available to them (Bernstein et al., 2019; Dai, 2017; Kell et al., 2013; Makel et al., 2016). Balanced learning that includes applied leadership experiences and direct instruction from teachers, coaches, or mentors in a domain, can support leadership talent development (Dai, 2017; Subotnik et al., 2011). As individuals engage in a domain, receive feedback on performance, and adapt their behaviors, skill sets, and mind-sets, career-related explorations can shift to commitments as talent is developed (Crocetti et al., 2008; Luyckx et al., 2006; Marcia, 1980). These commitments to a domain (e.g., pursuing a degree, engaging in a career field, managing people) may include leadership responsibilities. As such, it is critical that adolescents and emerging adults have opportunities to develop leadership competencies to support whatever postsecondary path they choose (e.g., higher education, careers,

military service). This systematic review of literature builds on current understandings of talent development and youth leadership and identifies directions for future research on leadership talent development programming.

Authors' Note

This article is based on part of the dissertation completed by Meyer et al. (2021). Melanie S. Meyer is now affiliated with Johns Hopkins University, Center for Talented Youth and School of Education.

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The sources included in the systematic review are provided in the reference list where they are indicated by *. No other data were used in this article. The methods used to generate the findings reported in the article are described fully within the manuscript and as such are not otherwise available for purposes of reproducing the results or replicating the study. There were no newly created, unique materials used to conduct the research.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. Colorado, Delaware, Hawaii, Idaho, Illinois, Iowa, Kentucky, Maryland, Minnesota, Nevada, Oklahoma, Oregon, Rhode Island, Texas, Vermont, Wisconsin.
2. The term "gifted" was not used in the database search because not all gifted programs identify leadership ability or provide services for leadership development (Matthews, 2015; Rinn et al., 2020). This study examined leadership within a talent development framework in which individuals are identified based on potential or demonstrated ability in a domain, and therefore, may not be labeled gifted (Dai & Chen, 2014; Subotnik et al., 2011).

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Anne N. Rinn, PhD, is a professor of educational psychology at the University of North Texas, where she also serves as Director of the Office for Giftedness, Talent Development, and Creativity. She has an undergraduate degree in psychology from the University of Houston and a doctorate in educational psychology from Indiana University. Her research centers on the social and emotional development of high-ability adolescents and emerging adults, especially undergraduates, and the psychosocial skills necessary for the development of academic talent.

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