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From Early Childhood to Adulthood: Leader Development in Indonesia

by

Charlina Gozali

Claremont Graduate University
2020

Approval of the Dissertation Committee

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Charlina Gozali as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Education.

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Abstract

From Early Childhood to Adulthood: Leader Development in Indonesia
By
Charlina Gozali

Claremont Graduate University: 2020

Leaders influence their surroundings in many ways. In companies, leaders impact work satisfaction, commitment, and engagement (Kouzes & Posner, 2015). In schools, leaders affect student behavior and learning outcomes (Wallace, 2006). Utilizing the Productive Giftedness Model (Paik, 2013, 2015), the present research examines the individual aptitude, instructional, and environmental factors that influence the development of young leaders in Indonesia. Participants in the study were recruited by *Indonesia Mengajar*, a highly selective intervention program in Indonesia which aims to improve educational conditions around the nation through the mobilization and equipping of local stakeholders. In order to examine leader development from the early to later years, the study uses a mixed-method approach that includes an online survey and a structured interview. Findings from the study demonstrate that leaders are made through a combination of opportunity, support, and resources. Most importantly, findings point to the integral role parents and schools play in the development of leaders and leader-related skills. Parents, educators and policymakers should ensure that every child has access to favorable conditions that will help cultivate leader-related skills from an early age.

Acknowledgments

This dissertation research is the product of the many opportunities, support, and resources that I have been presented with since early childhood to adulthood. Since I was a child, my parents have always encouraged me to pursue my wildest dreams and provided me with the means and support to do so. They are my first mentors, biggest supporters, and longest cheerleaders. Through the years, my siblings helped to cultivate skills essential for success such as problem-solving, negotiation, and communication. They have and will continue to be my leadership role models and the ones who challenge me towards greater growth.

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I would also like to thank Ibu Evi Trisna, former Executive Director and current Advisor at Indonesia Mengajar, for her guidance and encouragement, especially in the early stages of this research. Thank you to the staff of Indonesia Mengajar for providing access and logistical support. My deepest gratitude certainly goes out to the alumni of Indonesia Mengajar who participated in this study. This work would not have been possible without their willingness to share their stories (and time) so generously and patiently with me.

Last but not least, I thank my husband, James, who takes every opportunity to be with our kids so that I can get an extra hour or two to work on my dissertation. This dissertation would not have been completed without his sacrifice and dedication as a husband and father. Finally, thank you to my two children, Brooklyn and Jaxon, for giving me a personal reason to be invested in this research. I hope the findings from this study will help me provide the opportunities, support, and resources they need to become leaders for tomorrow.

Table of Contents

SECTION I: STATEMENT OF THE PROBLEM **1**

Introduction **1**

Purpose of the Study **2**

Significance of the Study **2**

Theoretical Rationale **4**

Individual Aptitude Factors **6**
Development. *6*
Ability. *6*
Motivation. *6*

Instructional Factors **7**
Learning climate. *7*
Quality of instruction. *7*
Quantity of instruction. *7*

Environmental Factors **7**
Home environment. *7*
Peers. *8*
Mentoring. *8*
Extracurricular time. *8*

Research Questions **8**

Background and Context **9**

Overview of Indonesia **9**

Founding and Development of Indonesia Mengajar **12**

Vision and Mission of Indonesia Mengajar **13**
Stakeholder mobilization. *13*
Leadership development. *13*
Social movement. *15*

Recruitment and Selection in Indonesia Mengajar **15**
Leadership competencies. *16*

CHAPTER II: LITERATURE REVIEW **18**

Key Concepts and Definitions in Leadership Research **18**

Individual Aptitude Factors **20**

Development **20**
Nature and nurture. *21*
Stages of leader development. *22*
Importance of the early years. *25*

Ability **26**
Leadership and intelligence. *26*
Leadership and early ability. *28*

Motivation **29**
Intrinsic and extrinsic motivation. *30*

Perceptions of effort and ability. 32
Personality traits related to motivation. 34

Instructional Factors 36

Learning Climates 36
Social environment. 37
Affective environment. 38
Academic environment. 39

Quality of Instruction 40
Characteristics of effective instructors. 41
Characteristics of effective instruction. 43

Quantity of Instruction 44
Instructional time. 45
Deliberate practice. 46

Environmental Factors 47

Home Environment 47
Parenting styles, attachment, and practices. 48
Parenting practices and children's motivation. 50
Other characteristics of the home. 51

Peers 53
Peer influence on leader development. 53
Features of peer relationships. 54
Peer mentoring. 55

Mentoring 56
Mentoring, coaching, and advising. 56
Role of mentoring in leader development. 57
Impact of mentoring on leadership identity. 58
Characteristics of effective mentoring relationships. 59

Extracurricular Time 61
Out-of-school time use. 61
Participation in extracurricular activities. 63

Conclusion 64

CHAPTER III: METHOD 65

Research Design 65

Sample 66

Description of Participants 67
Participant Demographics (n=38) 67
Sample Demographics (n=38) 68

Protection of Human Subjects 69

Instrumentation 70

Qualitative Instrument 70

Quantitative Instrument 71
PGM demographic survey. 72
PGM factor survey. 72

Pilot Test 73
Procedures 73
Data Analysis 75
Qualitative Data Analysis 75
Quantitative Data Analysis 76
Reliability Analysis 76
Limitations 79
CHAPTER 4: RESULTS 81
Quantitative Data 81
Demographic Survey 81
Elementary and secondary education. 82
Undergraduate and graduate education. 83
Childhood family background. 86
PGM Factor Survey 88
Learning resources in the home. 88
Access to opportunities, support, and resources. 89
Extracurricular time use. 90
Time spent sleeping, working, and developing leadership. 93
Qualitative Data 95
Individual Aptitude Factors 95
Development 95
The process of leadership discovery. 96
The process of leadership cultivation. 98
The process of leadership personalization. 101
Ability 103
Early ability, awards, and accomplishments. 103
Type of student in the early and later years. 106
Motivation 107
Motivation during school years and now. 107
Attribution of success. 110
Personality in the early and later years. 112
Habits and practices. 113
Instructional Factors 115
Learning Climates 115
Features of supportive learning environments. 115
Level of school expectations. 117
Quality and Quantity of Instruction 119
Quality of formal education. 119
Overall school enjoyment. 123
Characteristics of most influential teacher. 125
Characteristics of most influential course. 126
Leadership development in-school and out-of-school. 128
Environmental Factors 131

Home Environment 131
Neighborhood and community characteristics. 131
Family characteristics. 131
Home characteristics. 133
Parent characteristics. 138
Parental involvement and expectations. 140

Peers 143
Peer and colleague influence. 143

Mentoring 145
Mentor characteristics. 145
Role models. 148
Mentee characteristics. 149

Extracurricular Time 150
Extracurricular time use. 150
Hobbies and interests. 152

Contextual Factors 152

Significant Events 152
Historical and political events. 153
Personal life events. 154

Opportunities and Barriers 156
Opportunities for leadership development. 156
Barriers to leadership development. 157
Learning how to overcome barriers. 159

Additional Questions 160

Indonesia Mengajar and Leadership Development 160
Reasons for joining Indonesia Mengajar. 160
Influence on leadership development. 162
Most influential person. 164
Lessons learned. 165

Leadership and Career Questions 168
Definition of a successful leader. 168
Greatest resource. 170
Current job description. 171
Future career. 173
Advice for aspiring leaders. 173

Summary of Findings 175

Key Findings for Individual Aptitude Factors 175
Development. 175
Ability. 176
Motivation. 177

Key Findings for Instructional Factors 177
Learning climates. 177
Quality of instruction. 178
Quantity of instruction. 179

Key Findings for Environmental Factors 180
Home environment. 180
Peers. 181

Mentoring. *182*
Extracurricular time. *183*
Key Findings for Contextual Factors **184**
Key Findings for the Impact of Indonesia Mengajar on Leadership **185**
CHAPTER 5: CONCLUSIONS AND IMPLICATIONS **187**
Discussion of Key Findings **188**
Leaders are Born AND Made **188**
Leader Development is Talent Development **189**
Leader Development is Unique **190**
Leaders are not Self-Made **190**
Implications for Practice and Policy **192**
Development **192**
Ability **194**
Motivation **195**
Learning Climates **196**
Quality of Instruction **198**
Quantity of Instruction **199**
Home Environment **200**
Peers **201**
Mentoring **202**
Extracurricular Time **203**
Contextual Factors **204**
Implications for Research **204**
Conclusion **206**
References **208**
Appendix A **238**
Appendix B **240**
Appendix C **242**
Appendix D **244**
Appendix E **246**
Appendix F **250**
Appendix G **252**
Appendix H **254**

SECTION I: STATEMENT OF THE PROBLEM

Introduction

Leaders are important because leaders make a difference. World history is replete with examples of individuals exerting influence on communities all around the world (H. Gardner & Csikszentmihalyi, 2010). Mahatma Gandhi, through his practice and promotion of nonviolent resistance, helped guide India to independence in the early twentieth century. Nelson Mandela, the first black president of South Africa, fought against apartheid and fostered racial reconciliation at great personal cost. Martin Luther King Jr., at the cost of his very life, led the American Civil Rights Movement and paved the way for racial equality in the US. Other leaders exert their influence indirectly through their ideas, actions, and inventions (H. Gardner, 2011). Margaret Mead spent many years studying childhood and adolescence in the South Pacific and Southeast Asia, and her works influence how we understand childhood, family life, and culture. Mother Teresa devoted her life to caring for the poor, the sick, and the orphaned and founded the Missionaries of Charity, a Roman Catholic congregation active in humanitarian work in more than 133 countries. Einstein formulated the theory of relativity and made other important contributions to theoretical physics that altered how the world viewed the universe. Whether direct or indirect, leaders play an important role in shaping humanity's past, present, and future.

Leaders make a difference even in the smallest settings of everyday life. For instance, a leader's behavior has been found to be the most significant predictor of workplace engagement (Kouzes & Posner, 2016). Leadership influences "people's commitment, their desire to stay or leave, their willingness to put forth more discretionary effort, and their inclination to personal initiative and responsibility" (Kouzes & Posner, 2016, p. 15). Similarly, teacher leaders in the classroom have been found to influence student behavior and learning outcomes (Wallace,

2006). Utilizing a lifespan perspective, the present study examines the factors contributing to the development of young teacher leaders in Indonesia.

Purpose of the Study

The purpose of this mixed-method study is to examine the individual aptitude, instructional, and environmental factors in the early to later years that influenced the development of Indonesian teacher leaders. The teacher leaders were recruited by *Indonesia Mengajar*, a highly selective intervention program in Indonesia which aims to improve educational conditions around the nation through the mobilization and equipping of local stakeholders.

Significance of the Study

This study is important for multiple reasons. Firstly, there is a shortage of leaders around the world (Right Management, 2013; Shahid, 2015). In Indonesia, in particular, high-achieving and productive individuals are a rarity, especially by international standards. The poor quality of the Indonesian workforce has been cited as one of the most significant barriers to economic growth (di Gropello, Kruse, & Tandon, 2011; McKinsey Global Institute, 2012). As the fourth largest country in the world and the largest economy in Southeast Asia (Central Intelligence Agency [CIA], 2015), policies and practices in Indonesia affect more than 250 million people daily. Furthermore, with 42% of its population under the age of 25, Indonesia has a large potential for economic growth and improvement (Central Intelligence Agency [CIA], 2015). In fact, by 2030, Indonesia is projected to become the 7th largest economy in the world (McKinsey Global Institute, 2012). Indonesia's position in the global economy calls for studies that will help realize its human resource potential.

Secondly, historically, Indonesians were rarely trained to become leaders. For more than three-and-a-half centuries under the Dutch rule, the Indonesian public education system aimed to produce individuals who would become obedient servants of the Colonial government. Despite many attempts to reform the education system over the years, remnants of the old education system continue to be passed down. The Indonesian public education system, for instance, has been described as a place where "loyalty and obedience brought the most concrete rewards" (Bjork, 2005, p. 88). Teachers and students alike have been trained to submit to authority without question and obey instructions without critically examining them (Bjork, 2004). For these reasons, a greater understanding of the development of individuals with strong leadership capabilities is needed to inform the practice and policy of an emerging nation with historically top-down authority structures. Ultimately, the supply of leaders and other high-achieving individuals in Indonesia may significantly influence the course of the nation's economic and social progress.

Thirdly, at the same time, there is a shortage of research on the development of successful Indonesians, individuals living in an environment where achievement, productivity, and talent are seldom realized. The majority of studies on leader and talent development come from the West, a context that is radically different from Indonesia in many ways. In the United States, for example, 46% of 25 to 64 year-olds held a post-secondary degree (Organization for Economic Cooperation and Development [OECD], 2018). In contrast, only about 16% of 25 to 64 year-olds in Indonesia held a post-secondary degree in 2017 (OECD], 2018). A detailed understanding of the factors that influence the development of leaders and productive individuals in Indonesia are needed to ensure that resources for human development are allocated optimally and effectively.

Finally, studies of leader development also typically examine practices and programs that expand the leadership capacities of adults within organizational settings (Day, 2001; Reichard & Paik, 2010). There is a shortage of research examining how leader development occurs over the lifespan, especially during childhood and adolescence (Day, Fleenor, Atwater, Sturm, & McKee, 2014; Murphy & Johnson, 2011). In fact, according to research by Zenger (2012), the average age of individuals who participate in formal leadership training is 42. Considering the malleability of youth and the potential for interventions to be more effective early on in life, it is important to understand leader development prior to adulthood (Murphy & Johnson, 2011; Reichard & Paik, 2010). Furthermore, since "actual development takes place in the so-called white space between such leadership development events (i.e., leadership programs, workshops, and seminars)", it becomes equally important to examine how leaders and leader-related skills can be nurtured outside of formal leadership instruction (Day et al., 2014, p. 80).

Theoretical Rationale

The Productive Giftedness Model (PGM) was chosen as the theoretical framework based on its comprehensive approach to understanding high achievement, leadership, and eminence (Paik, 2013, 2015). The model examines the roots of success and talent development mainly from a psychological perspective, but also includes other perspectives such as education, economics, and sociology (Paik, 2013). In addition to being interdisciplinary, the model can be applied across a wide range of settings and populations (Paik, 2013; Walberg, 1984).

Productive giftedness is defined as achievement and accomplishment, and in rare cases, adult eminence (Paik, 2013). It includes high-achieving and high-ability individuals (Paik, 2013, 2015). The model also includes leadership, commonly found in high-achieving and high-ability individuals, as another form of productive giftedness (Paik, 2015). The central premise of the

model is that, contrary to traditional views of giftedness as innate, giftedness can be nurtured and developed under the right conditions (Paik, 2013, 2015; Paik, Gozali, & Marshall-Harper, 2019). This assertion is in line with other studies that have found exceptional conditions, rather than exceptional children, to be the precursor of giftedness (Bloom, 1985; Csikszentmihalyi, Rathunde, & Whalen, 1993; Walberg, 1984b). While having certain genetic predispositions might be helpful, nature alone is insufficient to guarantee an individual's success. In other words, the PGM is an *effort-ability* model that stresses the importance of nurturing giftedness, talent, or leadership (Paik, 2013, 2015; Paik, Gozali, & Marshall-Harper, 2019)

The ten factors in the model are divided into three main categories: individual aptitude factors (*ability, development, and motivation*), school factors (*quality of instruction, quantity of instruction, and learning climate*), and environmental factors (*home, peers, mentoring, and extracurricular time*). Figure 1 (below) presents a graphical representation of the model. The ten factors are largely *alterable* and have been found to significantly influence learning outcomes. The PGM also acknowledges *contextual factors* that influence outcomes indirectly and are less alterable (Paik, 2013, 2015; Paik, Choe, Otto, & Rahman, 2018). These include "historical, situational, political, economic, or other factors" that occur alongside individual development (Paik, 2013). Examples include historical events, cultural beliefs and practices, and individual characteristics such as gender, race/ethnicity, and socioeconomic status. Both alterable and contextual factors in the model have bearing on opportunities, support, and resources (Paik, 2013, 2015; Paik et al., 2018, 2019).

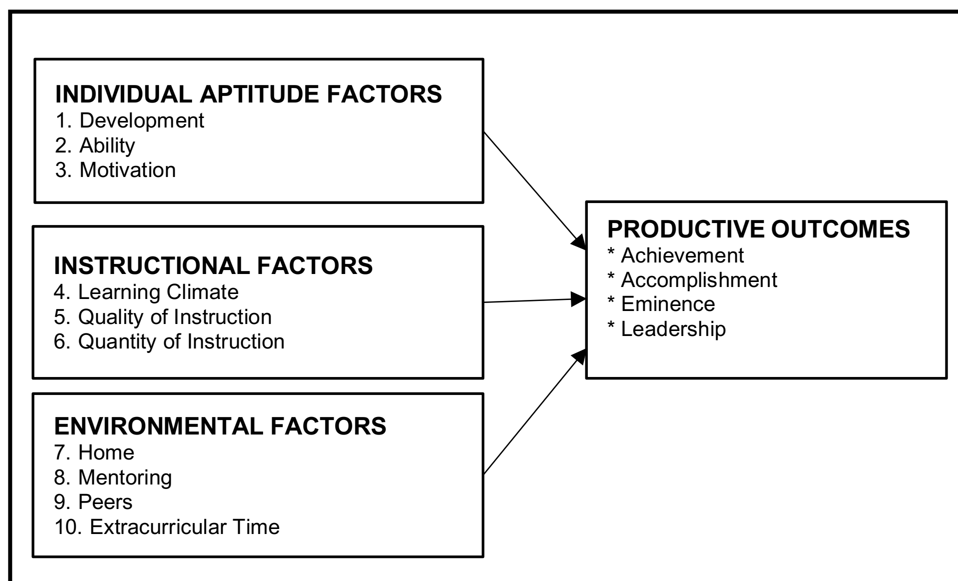

Figure 1. Productive Giftedness Model (Paik 2013, 2015)

Individual Aptitude Factors

Development. Development is defined as the “age or stage of maturation” (Paik, 2013, p. 106). The continuous nature of development covers an individual’s lifespan, beginning from the early years (childhood) to the later years (adulthood). It is also important to note that talent development is based on individual rates of growth as well as time invested within specific domains.

Ability. The ability factor includes traditional measures of ability, such as intelligence tests, but also other domain-specific measures of achievement such as awards, recognitions, and other accomplishments (Paik, 2013).

Motivation. Motivation is important in understanding human behavior and can be measured through personality tests or other empirical means (Paik, 2013). In addition to intrinsic and extrinsic motivation, it also includes mindsets, personality traits (e.g., perseverance, determination), and other related factors.

Instructional Factors

Learning climate. This factor includes characteristics of the school, classroom, or other environment that influences in and out of school experiences (Paik, 2013). The learning climate includes the physical, affective, social, and academic features of the school or classroom that influence learning. Additionally, the type of school, location, and neighborhood characteristics may also be useful in understanding the socio-cultural context of school or specialized learning (Paik, 2013).

Quality of instruction. The quality of instruction factor refers to learning-related variables such as "teachers, teaching, curriculum, subject matter, assessment, student projects, peer learning, and any other relevant information that adds to the quality of the school or classroom experience" (Paik, 2013, pp. 106–107).

Quantity of instruction. The quantity of instruction factor refers to the amount of learning or schooling individuals receive, typically represented by years of schooling and degrees earned (Paik, 2013). For individuals in non-academic domains, this may also include time spent in training or preparation outside of school.

Environmental Factors

Home environment. The "curriculum of the home" includes parent-child relationships, parenting practices and beliefs, routine of family life, family expectations, and supervision (Paik, 2008). This factor encompasses all aspects of home life that influence learning – from physical resources, such as books and writing materials, to emotional and psychological resources, such parental support and involvement.

Peers. In addition to the family, peers also play an influential role in an individuals' development. Peers are especially important during adolescence and can provide individuals with competition, motivation, and role models to emulate (Paik, 2013).

Mentoring. The mentoring factor includes formal and informal avenues of coaching, guidance, instruction, and skill-building (Paik, 2013). Mentoring typically occurs on a one-to-one basis, between a more advanced (i.e. mentor) and novice (i.e. mentee) individual in the same domain.

Extracurricular time. Extracurricular time consists of time spent on activities outside of formal schooling (Paik, 2013). This includes time spent participating in formal programs, such as after-school clubs and organizations, faith-based organizations, and music/art lessons, and informal uses of out-of-school time, such as television-viewing, technology usage (e.g., computer, smart phone, other), reading, or other talent-related activities.

Research Questions

The main research question guiding this study is: How do individual aptitude, school, and environmental factors in the early to later years influence leader development in Indonesian teacher leaders serving in disadvantaged communities?

Specifically, the research questions include:

1) How do individual factors (ability, development, and motivation) influence leader development?

2) How do school factors (quantity of instruction, quality of instruction, and learning climate) influence leader development?

3) How do environmental factors (home, mentors, peers, and extracurricular time) influence leader development?

4) How do contextual factors play a role in leader development?

Background and Context

The goal of this section is to provide an overview of the Indonesian context and *Indonesia Mengajar* (IM) program. The first section will briefly describe Indonesia's social, economic, and education contexts. The subsequent sections will discuss IM's founding and development and its tri-fold purpose of 1) mobilizing local educational stakeholders, 2) empowering a new generation of leaders with global competitiveness and local understanding, and 3) catalyzing a social movement aimed at educational improvement in Indonesia (Indonesia Mengajar, 2015c). The final section will discuss IM's recruitment and selection process.

Overview of Indonesia

Demographics and culture. Indonesia is the fourth most populous country in the world with a population of 267,026,366 inhabitants (CIA World Factbook [CIA], 2020). Although more than 87% of Indonesians are Muslims (CIA, 2020), the *Pancasila* and the Constitution guarantees the freedom to worship according to five state-approved religions: Islam, Catholicism, Protestantism, Buddhism, and Hinduism (Cooper, 1989). Religion and spirituality are integral aspects of society as Indonesians must declare membership to one of the state-approved religions. Indonesia is the largest economy in Southeast Asia (CIA, 2020), and the World Bank classifies it as lower-middle income (The World Bank, 2019). Despite some economic growth since the 1997 Asian Economic Crisis, issues relating to poverty, unemployment, corruption, and unequal resource distribution among the regions continue to plague the nation (CIA, 2020).

As the largest archipelago in the world with more than 17,000 islands spread across two oceans, Indonesia has more than 400 different languages and dialects. The Javanese and

Sundanese form the two largest ethnic groups in Indonesia. As a highly collectivist society, Indonesians value co-operation, submission, and filial piety. These values are imparted at home and also at school through religious and moral education classes (Koentjaraningrat, 1985). The family unit is typically hierarchical and reflects the larger societal system where relationships and roles are linear and clearly defined (Koentjaraningrat, 1985).

Education. During the Dutch occupation that lasted for 350 years, the primary goal of education was to serve the economic needs of the colonialists. Schools were used to spread Western ideas and religion, as well as train employees for the Dutch East India Company (Moegiadi, 1994). In order to maintain control, the Dutch government kept education at a minimum and used a "divide-and-rule" policy by establishing different rights and privileges for three groups of people: the Europeans, the Chinese immigrants, and the natives (Hoon, 2011). Although a small minority from elite Javanese families was permitted to attend Dutch schools, the majority of natives only had access to village schools that taught basic reading and writing skills (Kristiansen & Pratikno, 2006).

In 1942, the Japanese invaded and occupied Indonesia until 1945. In an effort to eradicate Dutch influence, the Japanese changed the language of instruction in schools from Dutch to *Bahasa Indonesia* (Moegiadi, 1994). Indonesia eventually declared its independence on the 17th of August 1945 and the Republic of Indonesia was formed under the leadership of President Sukarno. At the time of independence, more than 94% of the population was illiterate and only a small number had formal schooling (Kristiansen & Pratikno, 2006). Under the 1945 Constitution established by the Sukarno government, education was decreed to be the right of every citizen and plans were made to make six years of basic education accessible to every child. Due to rapid population growth and shortage of resources, this goal was only achieved in the

mid-1980s during the Suharto era. Finally, in 1994, secondary school fees were abolished and nine years of schooling (6 years in primary school and 3 years in junior secondary school) became mandatory (Kristiansen & Pratikno, 2006). Nearly 70 years after its independence, the literacy rate in Indonesia has increased from less than 6% in 1945 to more than 95% in 2018 (CIA, 2020). Two government bodies control the education system in Indonesia: the Ministry of Education and Culture (MOEC) and the Ministry of Religious Affairs (MORA). Led by the minister of education, the MOEC oversees the non-Islamic schools, which form 84% of the nation's schools (Moegiadi, 1994). Provincial, district and sub-district offices are responsible for managing school operations and implementing the national curriculum developed by the MOEC. The MORA, on the other hand, is responsible for the two main types of Islamic schools. While the students at *Pesantren* schools learn Arabic, read the Koran, and study Islamic law and traditions, students at *Madrasahs* are exposed to regular academic subjects in addition to Islamic education.

Although different in approach, both Islamic and non-Islamic schools follow the basic education structure laid out by the MOEC. Basic education in Indonesia consists of six years of primary school and three years of junior secondary school. Students then enter senior secondary schools for another three years and may choose to attend a general, vocational, or religious school. National examinations are held in the sixth and ninth grade to determine entry into prestigious senior secondary schools and universities. Less than 20% of Indonesian students attend university, and those who earn a place in higher education are given great respect by society. While the Indonesian term for students is *siswa*, university students are referred to as *mahasiswa*, which means honorable or great student.

Founding and Development of Indonesia Mengajar

In the 1950s, Dr. Koesnadi Hardjasoemantri, a rector at *Gadjah Mada University*, introduced the *Pengerahan Tenaga Mahasiswa* (PTM) program, literally translated to the Mobilization of University Students (Archive of Universitas Gadjah Mada, 2014). The program was established to help meet high school teacher shortages throughout Indonesia, and especially in regions outside the populated province of Java (Indonesia Mengajar, 2015a). As a response to the extremely low levels of education at the time of independence in 1945, the government, under the leadership of President Soekarno, built many school buildings but was unable to provide the teachers required. Between 1951 and 1962, PTM sent university students to teach in hundreds of villages across the nation (Archive of Universitas Gadjah Mada, 2014). At the start of the program in 1951, it deployed eight university students. By 1962, around 1,218 students had been sent out to remote areas around the nation (Widyastuti, 2012). The PTM program is considered as the main inspiration behind the founding of *Indonesia Mengajar.*

As a student at *Gadjah Mada University* (GMU) in the late 1980s, Anies Baswedan, current governor of the capital city of Jakarta, actively participated in a university community-service program known as *Kuliah Kerja Nyata* (KKN).[1] Like the PTM program, the KKN program also sent out university students to remote and rural areas across Indonesia to engage in various community-building projects. Baswedan was also well-acquainted with Dr. Koesnadi during his time at GMU. After finishing his graduate studies in the United States, Baswedan realized the need for future generations of Indonesians to have both "world class competence and grass roots understanding" in order to successfully compete in the global economy (Indonesia Mengajar, 2015c). As a result, *Indonesia Mengajar* (IM) was birthed in 2009 with three primary

[1] Anies Baswedan also served Indonesia's 27th Minister of Education and Culture from October 2014 to July 2016.

aims: 1) to encourage change in behavioral entity related to education and create sustainability impact in target entity, 2) to create a network of youth leaders who have world class competence and grassroots understanding, and 3) to nurture social movement in education in Indonesia (translated from Indonesia Mengajar, 2015c).

Vision and Mission of Indonesia Mengajar

In this section, the three aims of Indonesia Mengajar (IM) are briefly discussed. The proposed study will focus on IM's second aim of leadership development.

Stakeholder mobilization. IM operates under the belief that the communities they work with are not beneficiaries of their aid, but rather, partners and leaders in the creation of sustainable educational change (E. Trisna, personal communication, June 29, 2016). IM maintains the view that local stakeholders (e.g., students, teachers, principals, parents, community members, and education officials) are the ones who know how to help their children and their communities the best. In addition, since children are embedded in an ecological network consisting of the home, school, and community, educational improvement cannot be sustained by focusing on the school alone, but must involve the participation of local actors at all levels of society (E. Trisna, personal communication, February 2, 2016). As such, IM's main goal is to mobilize stakeholders at all levels to help solve educational problems in their own communities (Indonesia Mengajar, 2015c). IM partners with each community for a total of five years, after which local stakeholders are expected to sustain and advance educational progress on their own (Indonesia Mengajar, 2016), which leads to the importance of leadership development.

Leadership development. IM's second aim, which is the primary focus of this study, is to build "a nation that is filled with leaders with global competence and grass roots understanding" (Indonesia Mengajar, 2015c). In other words, IM envisions a new generation of

leaders possessing both macro- and micro- perspectives and capabilities; individuals with globally competitive skill sets and deep awareness and appreciation for local realities and cultures. IM achieves this aim by recruiting "the best university graduates" across the nation and assigning them the task of mobilizing local stakeholders in remote villages (Indonesia Mengajar, 2016). In addition to their academic performance, many of the graduates have won awards, participated in competitions, and worked at multi-national firms both nationally and internationally. IM believes that the one-year assignment teaching in remote villages serves as the best leadership training ground for future leaders. The young leaders will be faced with a host of challenges in their efforts to change the mindsets and behavior of local stakeholders. They will also be exposed to life in remote parts of the country and forced to find creative solutions to educational problems in light of limited resources.

The young leaders are officially referred to as *pengajar muda* or young teachers since their primary activity in each village is to teach elementary students (Indonesia Mengajar, n.d.). Although the young teachers' official responsibility is teaching in their assigned schools, their main targets for change are the adults in the community. In addition, the young teachers are tasked to equip, inspire, and motivate local educational stakeholders. Evidence of impact comes in the form of changes in the mindsets, attitudes, and behaviors of the teachers, principals, district officials, and parents in the community. The young teachers empower stakeholders to improve educational processes in their own communities by providing education and training (e.g.,, principal and teacher working groups), knowledge of national and international educational opportunities (e.g., scholarship and awards), resources (e.g., books to start a library), and networking opportunities (e.g., contacts in district education offices). These initiatives help

the adults in the community envision brighter futures for their children and hold higher educational expectations for each of them.

Social movement. In addition to community mobilization and leadership development, IM also aims to start a social movement for educational improvement (Indonesia Mengajar, 2016). Unlike in the United States and many other developing countries, the culture of volunteerism in Indonesia is non-existent. Since IM's founding in 2009, however, thousands of volunteers across the nation have participated in various forms of educational improvement and empowerment through various IM-initiated programs and para-organizations. *Indonesia Menyala* (Indonesia Lights), for instance, is a movement initiated by IM to inspire a love for reading in the young generation. Volunteers help to collect, package, and send books to children in Indonesia's remote parts. *Ruang Berbagi Ilmu* (RuBI) (translated as Knowledge Sharing Platform) is a teacher training program in which volunteers from various professions help to equip, motivate, and inspire teachers in underserved areas. Other community-led educational events and groups have also materialized from IM's efforts.

Recruitment and Selection in Indonesia Mengajar

Potential candidates interested in being deployed as young teachers by IM undergo a highly selective and competitive selection process that includes an essay, various assessments, interviews, and health examination (Indonesia Mengajar, 2015b).[2] In the first recruitment of 2017, more than 10,000 applicants started the online application process, 3,532 submitted their completed applications, and only 42 individuals were selected (Indonesia Mengajar, personal communication, August 2, 2017). This results in an acceptance rate of approximately 1.19%.

[2] IM sends out two batches of young teachers each year – referred to as the odd batch and the even batch. Recruitment for the odd batch begins in July and ends in August, while the recruitment for the even batch begins in November and ends in January. Successful candidates are then sent out to communities in November and June each year.

Table 1 details the number of applications received, submitted, and accepted in each batch. Since sending out its first batch in 2010, IM has attracted more than 200,000 applicants to its online recruitment page (Indonesia Mengajar, personal communication, August 2, 2017). It has deployed 795 teacher leaders to more than 20 districts and 19 provinces across Indonesia (Indonesia Mengajar, 2015b). To date, every young teacher IM sends out has completed his/her one-year assignment. Refer to Appendix A for a detailed overview of each recruitment phase.

Table 1.

Total number of applications received, submitted, and accepted by Indonesia Mengajar

Year	Batch Number	Applications Received	Applications Submitted	Number of Recruits	Percentage of Submitted Applications Accepted
2010	I	1,383	1,383	51	3.69
2011	II	4,299	1,231	72	5.85
2011	III	5,279	1,452	47	3.24
2012	IV	8,501	2,453	71	2.89
2012	V	6,844	1,968	52	2.64
2013	VI	7,502	2,098	74	3.53
2013	VII	6,230	1,692	52	3.07
2014	VIII	9,422	2,617	75	2.87
2014	VIIII	8,001	2,091	52	2.49
2015	X	10,555	3,068	75	2.44
2015	XI	8,249	2,123	50	2.36
2016	XII	14,846	4,301	42	0.98
2016	XIII	9,832	3,043	40	1.31
2017	XIV	10,213	3,532	42	1.19
2017	XV	111,156	33,052	NA	NA
TOTAL		222,312	66104	795	

Note. Data received from Indonesia Mengajar, personal communication, August 2017.

Leadership competencies. Out of all the requirements candidates must satisfy, the most important is their leadership ability. This is important because as young teachers in the program, they will be placed in a remote village on their own, often with few opportunities for communication with the outside world. In their attempt to mobilize local educational stakeholders, they may face numerous challenges such as adults' pre-conceived notions about the importance of education, cultural beliefs about children's roles, and even bureaucratic resistance. Without leadership ability and collaborative efforts, it is highly unlikely that the young teachers

will be successful in reaching the organization's ambitious goals. Hence, throughout the recruitment, selection, and training process, IM focuses on identifying individuals who demonstrate leadership competencies such as initiative, tenacity, and adaptability (see Appendix B for complete list of leadership competencies).

CHAPTER II: LITERATURE REVIEW

In this chapter, key concepts and definitions in leadership research will be discussed first. Using the Productive Giftedness Model (PGM) (Paik, 2013) as the guiding framework, research pertaining to each factor in the model will then be presented. Due to limitations in the scope of current leader and leadership development literature, the present review will refer extensively to research on high-achieving individuals. Individuals with high leadership capabilities are, after all, also typically high-achieving. Kirkpatrick and Locke (1991), for instance, noted that leaders are individuals with high levels of drive – "a broad term which includes achievement, motivation, ambition, tenacity, and initiative" (p. 48). Additionally, since studies on leader and leadership development in Indonesia are scarce, the review will draw mainly from research in the United States.

Key Concepts and Definitions in Leadership Research

Despite an absence of a universal definition of leadership, researchers generally agree that leadership is about influence. Gardner and Csikszentmihalyi (2010) define a leader as "somebody who significantly (and voluntarily) affects other people, their thoughts, their feelings, and their behaviors" (p. 258). Similarly, Popper and Mayseless (2003) consider leaders to be those whose role include "guiding, directing, taking charge, and taking care of others less powerful than they are, whose fate is highly dependent on them" (p. 42). Various types of leadership have been studied extensively in the literature, ranging from transformational and transactional leadership, to hopeful and servant leadership (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009; Bono & Judge, 2004; Peterson & Luthans, 2003; Popper & Mayseless, 2003; Popper, Mayseless, & Castelnovo, 2000; Reichard et al., 2011; Towler, 2005).

More recently, researchers have begun to distinguish between leader development and leadership development. Leader development is defined as "the expansion of a person's capacity to be effective in leadership roles and processes" (McCauley, Van Velsor, & Ruderman, 2010, p. 2).[3] Leadership development, on the other hand, is defined as "the expansion of a collective's capacity to produce direction, alignment, and commitment" (McCauley et al., 2010, p. 20).[4] In other words, leader development emphasizes the development of individual leaders and their intrapersonal capacities, whereas leadership development emphasizes the development of a group of individuals and their interpersonal capacities (Day, 2001). The former focuses on developing the qualities of individuals, while the latter focuses on developing the qualities of an organization (O'Toole, 2001). Leadership development cannot occur without first developing the skills and competencies of individual leaders. As such, the focus of the present study is on leader development.

Due to the fairly recent distinction made between leader development and leadership development, many researchers have used and continue to use the terms interchangeably. Day (2001), for instance, notes that many early studies claiming to examine leadership did so on an individual level, primarily examining the traits, characteristics, and behaviors of individual leaders. In actuality, these studies were referring to leader development rather than leadership development. Due to the considerable overlap and interchangeable usage of the terms in the past, the present literature review includes findings from leadership development research that is relevant or related to leader development. The exact terms (leader or leadership) used by each researcher will be used to protect the integrity of the research.

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[3] Leadership roles and processes include "setting direction, creating alignment, and maintaining commitment in groups of people who share common work" (McCauley et al., 2010).
[4] A collective is any group of people who share common work and goals, and includes both leaders and followers (Day, 2001; McCauley et al., 2010)

Individual Aptitude Factors

The field of leader and leadership theory and research have historically focused on linking individual personality traits with leadership (Day et al., 2014). This body of research, however, contributes very little to understanding leader development since traits are typically understood to be relatively stable and resistant to change (Day et al., 2014). More recently, however, researchers have begun to approach leadership as a capacity that can be developed over time, even beginning in the early years (Avolio, 2004). While earlier research focused on relatively enduring characteristics such as personality and temperament, more recent research focuses on alterable characteristics such as self-efficacy and self-regulation. The *development*, *ability*, and *motivation* factors outlined in the PGM aids in understanding how individual leader characteristics are developed in childhood and adolescence, and how they subsequently impact adult leaders and leadership.

Development

Early researchers viewed leadership as a mysterious trait that only a few individuals possessed. Recent studies, however, demonstrate that what constitutes as leadership can be broken down into measurable skills and behaviors. In other words, leadership is not an innate characteristic belonging to only a select few, but a skill that can be developed just like any other skill or talent. Leadership scholar Bruce J. Avolio (2004), for instance, wrote,

> Leadership development is by far one of the most complex human processes in that it involves leaders, followers, dynamic contexts, timing, resources, technology, history, luck, and a few things we have not yet thought of yet. However, it is in many ways like other complex phenomena, models, and processes in that once we break it down into its

> essential parts, or get the code, we can begin to understand how the various pieces fit together into the whole. (p. 4)

The PGM defines the *development* factor as a continuous process that includes the ages or stages of maturation (Paik, 2013). The following sections will review key research findings relating to the development of leader-related skills and talent.

Nature and nurture. The early emphasis on linking personality traits to leadership performance reflect the traditional view of leadership as an innate and predetermined quality in an individual. In the early 1800s, The Great Man Theory became one of the earliest known leadership theories (Northouse, 2007). The theory asserts that family lineage and social class most accurately reflects an individual's innate leadership qualities (Northouse, 2007). Charles Darwin and Sir Francis Galton are among the many researchers who provided empirical evidence supporting this theory (Murphy & Reichard, 2011). Darwin, for instance, purported that some species are innately superior to others based on physical and cognitive characteristics such as height and intelligence (Murphy & Reichard, 2011). Similarly, Galton is considered a pioneer in early eugenics research, which asserted that qualities such as intelligence were pre-determined by race and gender (Murphy & Reichard, 2011).

Leadership researchers have now examined the relationship between leadership and nearly every possible human trait, including physical traits (e.g. height), cognitive traits (e.g. intelligence), and personality traits (e.g. extraversion) (Bass & Bass, 2008). To more accurately assess the unique contribution of nature to the relationship between such traits and leadership, researchers have begun utilizing twin studies. One such study, for instance, found that genetics is responsible for about 30% of an individual's leadership development (Arvey & Chaturvedi, 2010). Identical twins reared apart were found to have developed similar personality traits,

characteristics, and skills relating to leadership ability (Arvey & Chaturvedi, 2010). Murphy and Johnson (2011) found that genetic studies of leadership generally suggest that between 30% to 59% of the variance in personality characteristics relating to leadership can be attributed to genetics. Nonetheless, between 50% to 70% of the variability still cannot be explained by genetics alone (Murphy & Johnson, 2011).

On the other side of the argument, proponents of nurture contend that leader/leadership development interventions are highly effective in promoting leadership outcomes (Avolio, 2004; Avolio, Avey, & Quisenberry, 2010; Avolio, Reichard, et al., 2009). Avolio et al. (2009), for instance, claim that leadership interventions, typically in the form of training and workshops, had a 66% probability of achieving a positive outcome. Avolio (2004) also argues that even the most favorable combination of genetic factors does not "preordain" an individual to a lifetime of effective leadership. The fulfillment of leadership potential, rather, involves a combination of "learning and leading (that) must go hand in hand" (Avolio, 2004, p. 3).

Echoing research in giftedness and talent development, research in leader/leadership development has begun shifting its focus from nature *or* nurture to nature-and-nurture interactions. It is, after all, impossible to truly separate the effects of nature from nurture, and vice versa (D. Goldhaber, 2012). Horowitz (2009) similarly emphasizes that the nature-nurture argument is more a function of interactions and transactions rather than two opposing factors. This new wave of leader/leadership research also highlights the importance of examining variations in developmental trajectories since individuals respond to similar events and life experiences in unique ways (Day et al., 2014).

Stages of leader development. In his seminal study on talent development, Bloom (1985) outlines three stages of talent development based on the varying instructional,

motivational, and psychological needs of individuals: the early years, the middle years, and the later years. Similarly, Jarvin and Subotnik (2010) proposed the scholarly productivity/artistry (SP/A) model of talent development which holds that the relative importance of talent outcomes – abilities, competencies, and expertise – vary with each stage of development. The SP/A model contains three stages: 1) transition from ability to competency, 2) transition from competency to expertise, and 3) transition from expertise to SP/A (Jarvin & Subotnik, 2015). As with Bloom's (1985) idea of eminence, the final stage of SP/A is also very rarely achieved (Jarvin & Subotnik, 2015).

Kouzes and Posner (2016) identify three stages of development that emerging leaders experience: 1) *looking out*, 2) *looking in*, and 3) *finding your true voice*. In the first stage, *looking out*, individuals typically look to other leaders for example and guidance. They may read biographies or autobiographies of exemplary leaders, listen to podcasts, attend leadership workshops, or seek the advice of mentors. In this stage, the focus is on learning the fundamentals through modeling and imitation. In the second stage, *looking in*, individuals begin to sense a need for more authentic expressions of their leadership. In other words, they realize that they cannot always copy and paste the styles of other leaders directly. They begin to explore and experiment with what works for them. This leads to the final stage, *finding your true voice*, in which individuals discover their own style of leadership. Success in this stage involves the merging of the outer and inner voices. Leaders who have found their true voice are able to lead authentically from the inside out (Debebe, 2017; Kouzes & Posner, 2016).

Utilizing a grounded theory approach, Komives, Owen, Longerbeam, Mainella, and Osteen (2005) proposed a leadership identity development (LID) model that includes six stages: 1) *awareness*, 2) *exploration/engagement*, 3) *leader identified*, 4) *leader differentiated*, 5)

generativity, and 6) *integration/synthesis*. A strong leader identity – viewing the self as a leader – has been found to be one of the most significant predictors of leadership effectiveness and career development (Day & Harrison, 2007). In the *awareness* stage, individuals recognize other leaders around them but do not yet view themselves as leaders. Their relation to others can be described as one of dependency – for instance, they are greatly affected by approval or praise from adults, teachers, coaches, and peers. Individuals in the *exploration/engagement* stage become increasingly involved in various organizational and group activities that promote the development of leader-related skills and identities. At this stage, encouragement and support from adults and peers continue to play an important role. In the *leader identified* stage, individuals begin to take on formal leadership roles and recognize the responsibility they have as leaders. At this stage, individuals' thinking shift from being *dependent* (i.e., conforming to others) to *independent* (e.g., self-directed behaviors, goal-oriented) and finally to *interdependent* (i.e., collaborative) (Petri, 2014). This vertical development highlights "movement of shifting thinking from self-interest toward group benefit and motivates leaders to exercise leadership in new ways" (Priest, Kliewer, Hornung, & Youngblood, 2018, p. 26). In the *leadership differentiated* stage, individuals recognize that leadership is a group process and that one of the leader's primary role is to facilitate that process through collaboration and communication with others. Individuals then move to the *generativity* stage whereby they become increasingly focused on larger and more long-term goals. For instance, they become more committed to develop other leaders and use their time to serve others (rather than being served). In the final stage, *integration/synthesis*, individuals acknowledge that leadership development is a continuous and lifelong process. As such, they foster habits and attitudes that enable continual learning and growth.

Importance of the early years. Leadership intervention studies demonstrate that the impact of leadership training in adulthood is typically small and limited to specific organizational settings (Reichard & Paik, 2010). While adult leadership interventions have had some success (Avolio, Reichard, et al., 2009), their impact in the long run may be smaller and more limited compared to training and investments made in the early years. In adulthood, individual characteristics, mindsets, and behavior become far less malleable than in early childhood. As such, interventions in early childhood are likely to have greater and more lasting effects. Consistent with this assertion, studies on talent development also point to the importance of providing early exposure and support in order to maximize talent (Merton, 1968; Paik et al., 2019; Paik & Walberg, 2007). From a child development perspective, early childhood represents a critical period for learning, development, and growth. Brain research, for example, point out that brain development occurs most rapidly and progressively in the early childhood years, especially between the ages of zero to three years old (Bornstein, 1989; Bornstein & Colombo, 2012).

Leader development should begin in as early as possible because "relevant developmental experiences may occur more readily during sensitive periods of childhood and adolescence, which influence development during adulthood" (Murphy & Johnson, 2011, p. 75). The authors propose a framework that highlights the influence of early developmental factors including genetics, temperament, gender, parenting practices, and educational experiences (Murphy & Johnson, 2011). Popper and Mayseless (2007) similarly argue that the "building blocks of leader development" reside in *early* psychological capabilities, motivation, supportive environments. Furthermore, as education economists have argued, investments in the early years are the most cost-effective because returns can be reaped for longer periods of time and

remediation at later ages tend to be more costly (Calman & Tarr-Whelan, 2005; Heckman, 2000, 2011).

Reichard and Paik (2010) also assert that providing children with a supportive environment that results in a strong leader identity is the foundation of adult leadership. In the first 18 years of life, children spend a majority of their time with their families (zero to six years old) and in school (six to eighteen years) (Reichard & Paik, 2010; Walberg & Paik, 1997). Hence, it is important to examine how leader-related skills and characteristics can be nurtured in early childhood environments, including the home, school, and extracurricular settings. As further discussed in the next sections, skills gained through leader training in the early years will certainly influence achievement and outcomes in other areas such as academics, sports, and other talent development.

Ability

The Productive Giftedness Model (PGM) conceptualizes *ability* in terms of prior achievement and measurable outcomes such as standardized tests, grades, awards, and other domain-specific accomplishments (Paik, 2013). In the leader and leadership development literature, *ability* is also most often conceptualized in terms of cognitive capacity such as IQ or GPA scores. *Ability* also includes early demonstrations of leadership, such as involvement in student government or other organizational initiatives.

Leadership and intelligence. Leadership theory researchers have long studied the relationship between cognitive measures of ability and adult leadership. Some argue that cognitive ability, typically measured through intelligence tests or GPA, is a strong indicator and predictor of future leadership performance (Marshall-Mies et al., 2000; Schneider, Paul, White, & Holcombe, 1999; Simonton, 2006). For instance, findings from a quantitative meta-analysis

by Lord, De Vader, and Alliger (1986) have often been cited as providing evidence for the intelligence-leadership link. In their examination of the relationship between leadership and traits such as intelligence, extroversion-introversion, conservatism, and dominance, they found that intelligence had the strongest correlation with leadership (Lord et al., 1986). Similarly, in his examination of political leaders, Simonton (2006) asserts that a leader's performance was positively associated to their intelligence. Intelligence during adolescence has also been found to predict leadership performance and related socio-emotional outcomes as adults (Bartone, Snook, Forsythe, Lewis, & Bullis, 2007; Schneider et al., 1999).

Others, however, contend that the relationship between intelligence and leadership is "considerably lower than previously thought" (Judge, Colbert, & Ilies, 2004, p. 542). Recent studies, for example, found that intelligence poorly predicts leadership outcomes (Guerin et al., 2011; Li, Arvey, & Song, 2011) and the motivation to lead (A. E. Gottfried et al., 2011). In their quantitative meta-analysis, the authors found that the intelligence-leadership link, although non-zero, was relatively small (Judge et al., 2004). The authors note that other individual traits, such as extraversion and conscientiousness, have stronger relationships to intelligence (Judge et al., 2004). On a similar vein, Li, Arvey, and Song (2011) also did not find a significant relationship between general mental ability and leadership outcomes in males and females. Findings from the longitudinal study, however, point to the positive influence that self-esteem had on leadership outcomes. In their study of childhood and adolescent antecedents of leadership, Guerin et al., (2011) concluded that there is no relationship between IQ during adolescence and leadership potential in adulthood. Instead, the authors found that personality traits, including temperament and social skills, had a significant relationship to leadership potential. The relationship between personality traits and intelligence will be discussed further in the Motivation section.

In their attempt to explain the inconsistencies found among the various studies on the relationship between intelligence and leadership, Judge et al. (2004) highlighted a few key differences between their meta-analysis and Lord et al.'s (1986). Judge et al.'s (2004) study included 129 correlations, while Lord et al.'s (1986) study only had 18 correlations (Judge et al., 2004). A significant portion of the studies in the Lord et al.'s (1986) meta-analysis used academic achievement as a proxy for intelligence. Hence, the intelligence-leadership relationship may be overestimated since academic achievement includes traits other than intelligence, for example, motivation and language ability (Judge et al., 2004). Perhaps most importantly, a majority of the studies in Lord et al.'s (1986) meta-analysis used a perceptual, rather than objective, definition of leadership. While their findings imply that intelligence can positively influence people's perception of leaders, it does not predict the leader's objective performance (Judge et al., 2004). The inconsistencies found in the intelligence-leadership literature highlights the need for greater standardization in the operationalization and measurement of the two constructs. More studies are required to clarify the relationship between cognitive ability and leader outcomes.

Leadership and early ability. Despite disagreement on the exact influence of cognitive ability on adult leadership, researchers generally agree that leader development is a cumulative and self-reinforcing process that should ideally begin early in life (Avolio, 2004; Murphy & Johnson, 2011). In addition to intelligence, researchers have identified other characteristics that influence leader outcomes. Popper and Mayseless (2007) propose that "building blocks" to leader development include capacities such as self-confidence, pro-social orientation, proactive optimistic orientation, and high motivation to lead. These capacities influence how leaders learn, and eventually, how they develop as leaders (Popper & Mayseless, 2007). Similarly, Day,

Zaccaro, and Halpin (2004) assert that certain individual attributes early in life may serve as seeds for later leader development. These include responsibility, adaptability, initiative, an ability to inspire and mobilize others, and mentoring and communication skills.

Emphasis on the teaching and development of leader-related characteristics early in life echo an important principle in education economics known as the *Matthew Effect*. In 1968, economist Thomas Merton observed that eminent scientists were given disproportionately more credit in collaborative work or independent multiple discoveries. Since the reward system favored the more established scientists, the less known scientists became increasingly obscure while the well-known scientists became increasingly acclaimed (Merton, 1968). Merton (1968) later coined the term the *Matthew Effect* to describe how the accumulation of early advantages can lead to later advantages. Furthermore, while early advantages can help propel an individual towards success, early disadvantages can prevent an individual from attaining success (Heckman & Masterov, 2007). The *Matthew Effect* highlights the importance of investing in early childhood education to mitigate the negative effects of poverty and low parental education. Investments in early childhood education is also the most cost-effective way to minimize the impact of negative life circumstances since "the later in life we attempt to repair early deficits, the costlier remediation becomes" (Heckman, 2000, p. 3). In the same way, investments in characteristics and capacities that influence leader outcomes early on in life should yield greater benefits for individuals and society in the long run.

Motivation

The *motivation* factor in the PGM includes both intrinsic and extrinsic reward systems, mindsets, personality traits, and other factors that influence the attainment of productive outcomes (Paik, 2013). In general, *motivation* can be defined as "within-person processes that

predict the direction, intensity, and persistence of behavior" (Kanfer, 1990 in Chan & Drasgow, 2001, p. 482). In the words of motivation researchers, Ryan and Deci (2000a), "to be motivated means *to be moved* to do something" (p. 54). While an unmotivated individual lacks the desire or incentive to act, a motivated person is "someone who is energized or activated toward an end" (R. M. Ryan & Deci, 2000a, p. 54). As such, high-achieving and successful individuals are often characterized as those who are also highly motivated. In particular, these individuals are described as having *focused motivation*, defined as "undeterred, intentional perseverance with an end goal or product in mind" (Paik, 2013, p. 106). The large body of research on motivation highlights its influential role in human productivity and talent development.

Despite being a widely studied topic across many disciplines, there is a paucity of research examining the relationship between motivation in childhood and adolescence to leadership in adulthood (A. E. Gottfried et al., 2011). Existing research on motivation and leadership has typically borrowed from general motivational theories and included adulthood constructs such as power, affiliation, authority, mastery, goal orientation, and self-efficacy (Avolio, Reichard, et al., 2009). More recently, researchers have begun to examine "the psychological antecedents of motivation to lead" that begin in early childhood (Popper & Mayseless, 2007, p. 671). Early findings in this area point to the possibility of motivation as a form of giftedness in itself, rather than just a prerequisite or criteria for achievement and giftedness (A. W. Gottfried & Gottfried, 2010).

Intrinsic and extrinsic motivation. Decades of research have revealed two important observations regarding human motivation. First, people vary in the levels or amounts of motivation they display. Second, and perhaps most importantly, they also vary in the orientation, or "underlying attitudes and goals that give rise to action", of that motivation (R. M. Ryan &

Deci, 2000a, p. 54). Self-Determination Theory (SDT) posits that variations in individual motivation is influenced by the innate human need for autonomy, competence, and relatedness (R. M. Ryan & Deci, 2000b). SDT recognizes three major types of motivation: intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation is defined as "the doing of an activity for its inherent satisfactions rather than for some separable consequence" (R. M. Ryan & Deci, 2000a, p. 56). In contrast, extrinsic motivation is used to describe actions performed to achieve some separable goal (R. M. Ryan & Deci, 2000a). Finally, amotivation refers to a "the state of lacking an intention to act" (R. M. Ryan & Deci, 2000a, p. 61).

Intrinsic motivation has been identified as a critical component in achievement and talent development, and has been linked to various positive academic outcomes (Deci & Ryan, 1996; Grolnick, Ryan, & Deci, 1991; Shernoff & Hoogstra, 2001). In their study of leadership involvement in adolescents, Gottfried et al. (2011) found that although motivationally gifted - individuals with high levels of intrinsic motivation – and intellectually gifted teens – those with high levels of intelligence - were equally involved in extracurricular activities, only the motivationally gifted teens took on more leadership positions (A. E. Gottfried et al., 2011). Using data from the Fullerton Longitudinal Study (FLS), Gottfried et al. (2011) also found that children who had demonstrated greater levels of academic intrinsic motivation, or the enjoyment of school learning, tend to become adults who experienced greater enjoyment of leadership and were motivated to lead regardless of external rewards. In contrast, adults who led out of a sense of social duty had reported experiencing lower levels of academic intrinsic motivation as children (A. E. Gottfried et al., 2011).

While researchers unanimously agree on the positive influence of intrinsic motivation on behavior, there is less consensus when it comes to extrinsic motivation. Economists, for

instance, argue that as rational agents, humans are motivated by incentives. The basic "law of behavior" is that "higher incentives will lead to more effort and higher performance" (Gneezy, Meier, & Rey-biel, 2011, p. 191). Psychologists, however, argue that external incentives are at best, weak reinforcers in the short-term and negative reinforcers in the long-term (Gneezy et al., 2011). In a classic study by Deci (1975), college students were asked to play with a puzzle and randomly assigned to either a reward or no-reward condition. In a later unrewarded period, students in the no-reward condition reported greater interest and also played with the puzzle for a longer period of time (Deci, 1975). Nonetheless, Ryan and Deci (2000a)maintain that not all forms of extrinsic motivation are bad. When extrinsic motivation is combined with internalization and integration, an outcome whereby individuals believe in the instrumental value of a goal, they can experience outcomes similar to that of intrinsic motivation.

Perceptions of effort and ability. As illustrated in PGM, effort and ability are key concepts in developing one's skills (Paik, 2013; 2015). Similarly, in their research on personality and motivation, Dweck and Leggett (1988) noted that an individual's *implicit theory of intelligence* – beliefs about the nature of intelligence and ability – can greatly influence his or her behavior and subsequent achievement. Those with a *fixed theory of intelligence* believe that intelligence and ability are fixed traits that cannot be developed or learned - one either has ability or they do not (Bempechat, London, & Dweck, 1991). On the other hand, those with an *incremental theory of intelligence* believe that intelligence and ability are malleable traits that can be learned and cultivated through effort and hard work. Similarly, an individual's conceptualization of effort will also determine his/her actions. Someone with a negative view of effort, who regards the exertion of effort as an indicator of having low ability, will be less likely to be effortful in his/her activities (Dweck, 1999). Someone with a positive view of effort, on the

other hand, regards effort as a means to learn and increase ability, and are likely to demonstrate greater effort in his/her endeavors (Dweck, 1999). Dweck also asserts that one's perception of effort and ability will influence their definition of success (Dweck, 2007b). Those who emphasize effort typically define success in terms of learning, improving, and doing their personal best (Dweck, 2007b). In contrast, those who emphasize ability tend to define success as achieving superiority over others (Dweck, 2007b).

According to Dweck (2007a), individuals with an *incremental view of ability* "don't necessarily believe that anyone can become an Einstein or a Mozart, but they do understand that even Einstein and Mozart had to put in years of effort to become who they were" (p. 35). Hence, individuals with *an incremental view of intelligence and ability* are more likely to exert effort in their tasks and persevere in the face of challenges (Dweck, 1999, 2006). Similarly, Olszewski-Kubilius et al., (2019) observed that "individuals who become outstanding performers and producers have more than just raw talent in the domain or opportunities to develop their talent – they have the will, drive, and focus to take advantage of opportunities with which they are presented, and the capacity to persist through failures even as the bar for success gets higher" (p. 161). In other words, beliefs about ability and effort influences one's motivation, commitment, behavior, and eventually, outcomes.

Individuals who hold a positive view of effort and ability generally demonstrate a *mastery orientation* whereby learning - "increasing their competence, understanding, or to master something new" (Dweck, 1986, p. 1040) – becomes the primary goal. Individuals with *performance or goals orientation*, on the other hand, tend to "gain favorable judgments of their competence or avoid negative judgments of their competence" (Dweck, 1986, p. 1040). The adoption of adaptive motivational patterns related to learning goals leads to a variety of

productive outcomes including higher levels of resiliency (Bempechat et al., 1991; Hogarth & Villeval, 2014), more effort (Folmer et al., 2008), increased creativity in their problem-solving strategies (Dweck, 2007b), and increased confidence (Beatson & Halloran, 2013; Blumenfeld, Pintrich, & Hamilton, 2011). Since their goal is learning rather than performance, students with adaptive motivational patterns also learn more and demonstrate more frequent achievement behavior (Bempechat et al., 1991; Covington & Omelich, 1979; Dweck, 2007b). They also tend to have more positive and longer-lasting interpersonal relationships (Dweck, 2007b).

Personality traits related to motivation. In the 1930s and 1940s, trait theorists contended that great leaders possessed innate qualities and characteristics that separated them from non-leaders (Northouse, 2007). More recent research has also identified individual traits and personality in childhood and adolescence that predict adult leadership (Bono & Judge, 2004; Chan, Rounds, & Drasgow, 2000; Guerin et al., 2011; Judge, Bono, Ilies, & Gerhardt, 2002; Mumford, Zaccaro, Connelly, & Marks, 2000; Reichard et al., 2011). Extraversion in childhood, adolescence, and adulthood, for instance, have been found to be consistently correlated with leadership (Bono & Judge, 2004; Judge et al., 2002; Reichard et al., 2011), especially when accompanied by high levels of social skills (Guerin et al., 2011; Recchia, 2010). Using data from the Fullerton Longitudinal Study, Reichard et al. (2011) found that extroversion was disproportionately attributed to youth leadership emergence and youth leaders. The authors found that extroverted youth were more likely to become leaders in the workplace as adults. Aside from extraversion, other characteristics predictive of adult leadership include openness to experience and conscientiousness (Judge et al., 2002; Strang & Kuhnert, 2009), social intelligence (McCullough, Ashbridge, & Pegg, 1994), communication and socio-emotional skills

(H. Gardner & Csikszentmihalyi, 2010; Riggio, Riggio, Salinas, & Cole, 2003), self-esteem (McCullough et al., 1994), and self-efficacy (McCullough et al., 1994).

Chan and Drasgow (2001) proposed a framework, Motivation to Lead (MTL), to predict leadership potential. According to the model, MTL is influenced by an individual's leadership efficacy and past leadership experience (Chan & Drasgow, 2001). Leadership efficacy and experience, in turn, are influenced by antecedents such as general cognitive ability, personality, and sociocultural values (Chan & Drasgow, 2001). This area of research also highlights the importance of characteristics such as self-regulation (Avolio & Hannah, 2008; Day et al., 2014; Gardner et al., 2005) and leadership identity (Day, Harrison, & Halpin, 2009; Lord & Hall, 2005) in the formation of an individual's desire to lead (Chan & Drasgow, 2001). Self-regulation is defined as "the process by which persons are actively involved in regulating their activities toward a broad range of short-term and long-term goals" (Baumeister & Vohs, 2003 in Murphy & Johnson, 2011, p. 465). The ability to self-regulate includes skills such as goal-setting, planning, and adherence. Leadership identity, or how one perceives his/her characteristics and relationships with others within an organizational setting, has similarly been found to influence leadership beliefs, styles, and behavioral practices (Murphy & Johnson, 2011). Both self-regulation and leadership identity have been linked to leader and leadership effectiveness (Day et al., 2014).

Leaders and high-achievers typically have higher levels of commitment, focus, and determination. Angela Duckworth and colleagues referred to this combination of strengths as grit, defined as "the perseverance and passion for long-term goals" (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087). The researchers assert that what distinguishes high-achieving individuals from low-achieving ones is their level of "grittiness". For instance, grit

was positively correlated with the likelihood of completing the strenuous first year at West Point (Kelly, Matthews, & Bartone, 2014). Grit was also positively related to the ranking of National Spelling Bee participants (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011). Similarly, a study of KIPP charter school graduates found that character – which includes qualities such as persistence, self-control, curiosity, conscientiousness, grit, and self-confidence – was a better predictor of academic success than grades or academic ability (Tough, 2012).

Instructional Factors

As previously mentioned, leader and leadership development studies typically focus on development in adulthood. As such, there is a shortage of research examining how schools, the main conduit of formal education during the childhood and adolescence years, influence leader development. This section will borrow from the talent development literature and provide connections to leader development.

Learning Climates

Prior research has demonstrated the impact of environments, typically the school and classroom environment, on the academic, emotional, social, and psychological development of children and adolescents (Hong & Milgram, 2011; Walberg & Greenberg, 1997). Studies conducted in the United States and internationally have found relationships between student perceptions of the classroom environment and various learning and behavioral outcomes. For instance, in a meta-analyses of more than 3,000 studies, Walberg (1984) found that the school-classroom environment strongly influenced students' affective, behavioral, and cognitive outcomes. Tableman (2004) similarly argues that the school climate, defined as "the physical and psychological aspects of the school that are more susceptible to change and that provide the preconditions necessary for teaching and learning to take place" (p. 2), is an important

consideration in student learning. Student leadership studies have also found that learning environments are important in the development of leaders (Priest et al., 2018). Since learning and instruction often occur outside the school, the PGM model uses the term *learning climates* – which includes instructional settings in-school and out-of-school. The following section will examine the social, affective, and academic characteristics of learning environments that support leader development (Paik et al, 2019).

Social environment. A social environment that supports learning promotes communication and interaction among all its members (Tableman, 2004). Teachers and school leaders collaborate and are collegial with one another. Students are included in decision-making processes and given opportunities to exercise leadership through participation in student-led organizations or school-level committees (Murphy & Johnson, 2011). In the classroom, students can practice leadership skills by facilitating classroom discussions, working on group projects, and public-speaking opportunities (Murphy & Johnson, 2011). Mitra (2006) asserts that students who attended schools that empowered student voices were more likely to develop as leaders. Supportive school environments also recognize parents as an integral partner in student learning and actively include them in the educational process (Tableman, 2004). Research, in fact, has highlighted the importance of building family-school-community partnerships in order to support student learning and development (Epstein, 2005; Epstein et al., 2009; "School-Family Partnerships," 2017; Simon & Epstein, 2001).

An extensive literature review of school climate research conducted by Thapa, Cohen, Guffey, and Higgins-D 'alessandro (2013) also highlighted the importance of interpersonal relationships in student learning. Csikszentmihalyi, Rathunde, and Whalen (1993b), for example, found that students appreciated teachers who "took them and their abilities seriously"

(p. 189). Similarly, Armstrong (1998) emphasized the need for teachers to "hold an unqualified belief in the genius of every student…regardless of labels, psych reports, complaints from other teachers, test results, or overt signs of less than genius behavior in class" (pp. 64-65). Positive student-teacher relationships were marked by warmth, encouragement, trust, and deep understanding of the unique (and often complex) learning needs of students (Csikszentmihalyi et al., 1993). In addition to a positive student-teacher relationship, a sense of collegiality among students is also important as research has found that students learn more when they perceive other students in the classroom to be working towards the same goals (Walberg & Anderson, 1968). As previously mentioned, leadership identity development is a relational process that takes place within communities (Priest, et al., 2018). As such, learning environments for future leaders should include many opportunities to interact with peers, teachers, mentors and other adults (Priest, et al., 2018).

Affective environment. An affective environment that supports learning promotes a sense of belonging, community, and self-esteem among its constituents (Tableman, 2004). Interactions among teachers, staff, students, and their families are respectful and responsive (Tableman, 2004). At the same time, students, teachers, and staff feel valued by the school (Tableman, 2004). Supportive learning environments also provide psychological (as well as physical) safety for students by demonstrating "an acceptance of differentness, openness and tolerance of variability, renunciation of rigid sanctions against (harmless) mistakes, and provision of a 'creativogenic' climate" (Cropley & Urban, 2000, p. 488). Teachers should value all students' contributions, welcome students' questions, and reward divergent thinking (Armstrong, 1998; Fairweather & Cramond, 2010; Hong & Milgram, 2011; Pfeiffer & Thompson, 2013). Teachers should also demonstrate an acceptance towards diversity and

variability among students, while maintaining zero tolerance towards any form and degree of bullying or disrespect (Cropley & Urban, 2000; Fairweather & Cramond, 2010).

Academic environment. Based on their research on eminent individuals, Bloom and Sosniak (1981) found that the goals of formal schooling are often at odds with the goals of talent development. They found that many of their talented participants had unpleasant experiences with formal schooling (Bloom & Sosniak, 1981). Formal schooling is typically characterized as being rigid, short-sighted, group-oriented, and teacher-centered. Schools are primarily concerned with students' performance on standardized examinations, and hence, teaching approaches reflect a more factory-like attitude toward learning (e.g., all students have same learning outcomes at the same time). In contrast, talent development – in sports, arts, or leadership - focuses on an individual child's learning needs and also long-term development. Schools should strive to be places where various talent (including leader-related talent) can be cultivated and rewarded. Bloom and Sosniak (1981) contend that such schools "expanded the individual's interests, made the development of talent real and important, and helped the individual feel worthwhile and valuable" (p. 94). These ideas apply toward leader development as well.

An academic environment that supports learning promotes the joy of learning and self-fulfillment (Tableman, 2004). In their study of talented teenagers, Csikszentmihalyi et al. (1993b) found that the experience of positive emotional states serves as an incentive that motivates students to increase their participation and commitment in a field. Schools and classrooms should also foster a learning goal climate that emphasizes mastery rather than performance (Dweck, 1986). Learning climates that promote mastery enhances talent development by teaching students the importance of effort and the incremental nature of ability

(Ommundsen, 2001, Paik, 2013). Similarly, learning goal climates have been found to foster leadership development by permitting individuals to focus on skill-building instead of impressing others with their performance (Day, 2001). Supportive academic environments are also characterized by holding high expectations for all students, providing timely and relevant feedback, and promoting a culture of high achievement (Tableman, 2004).

Quality of Instruction

Outside of the home, children and adolescents spend significant portions of their time in school. School teachers possess the power to enhance or diminish students' progress in and out of the classroom. Unfortunately, the goals of talent development and traditional public education are often at odds, hence making schoolteachers less-than-ideal instructors for talent development (Bloom & Sosniak, 1981). For instance, while the main purpose of public education is the dissemination of knowledge to the masses, talent development requires the "slow cultivation of a unique individual's diverse gifts" (Csikszentmihalyi et al., 1993, p. 178). Talent development also requires individualized instruction under teachers who are well-connected experts in the field, but most schoolteachers have been reduced to mere "information technicians" who are no longer active practitioners in their subject areas (Csikszentmihalyi et al., 1993, p. 177). Furthermore, instructors focused on talent development focus on the long-term development of the child, while teachers typically only focus on child's development in the current school year (Bloom & Sosniak, 1981). Due to the competing demands of schooling and talent development, individuals and their families typically turn to instructors outside the school to help cultivate talent. This section, therefore, will examine the characteristics of instructors inside and outside the school. Since the *quality of instruction* depends entirely on the quality of the instructor, we

will first describe general characteristics of high-quality instructors, followed by a discussion on the characteristics of high-quality instruction.

Characteristics of effective instructors. In her study of effective teachers, Collinson (1996) characterizes effective instructors as those possessing professional knowledge, interpersonal knowledge, and intrapersonal knowledge. Research has long established the importance of instructors' professional knowledge in providing high quality learning experiences (Baker & Horton, 2004; Bloom, 1985; Collinson, 1996; Jarvin & Subotnik, 2010). Professional knowledge includes domain-specific knowledge, curricular knowledge, pedagogical knowledge, procedural knowledge, and tactical knowledge (Bloom, 1985; Collinson, 1996; Côté & Gilbert, 2009). Possession of current and extensive professional knowledge is especially important when instructing talented individuals since they seem to be more sensitive to the quality of teaching in their talent areas (Csikszentmihalyi et al., 1993). Furthermore, recognizing the importance of practice time for skill acquisition and talent development, effective instructors also plan practices meticulously and ensure that sessions are maximized and efficiently utilized (Baker & Horton, 2004; Côté, Baker, & Abernethy, 2007; Horton, 2012). UCLA's legendary basketball coach, John Wooden, for example, was known for spending hours in preparation for practice sessions to ensure that every player was active during the entire session (Wooden, 1983 in Baker, Horton, Robertson-Wilson, & Wall, 2003).

Although its importance cannot be understated, professional knowledge alone is insufficient to make a good teacher, coach, or instructor (Collinson, 1996; Côté & Gilbert, 2009). In their research on talent development, Jarvin and Subotnik (2010) found that the student-teacher relationship is the single most influential factor in talent development (Jarvin & Subotnik, 2010). Since teaching involves interactions with students, parents, colleagues, school

leadership, and the wider community, interpersonal or “people skills” become highly imperative (Collinson, 1996). Effective instructors manage their relationships with students, parents, and the community in ways that will benefit the students’ development. Effective instructors are those who have earned students’ trust and commitment by demonstrating concern for their overall development, on and off the field (Bloom, 1985; Csikszentmihalyi et al., 1993). Similarly, in her research on high-achieving second generation Latino students, Kula (2013) also noted how teachers, along with counselors and administrators, served as “key sources of social and cultural capital” on the pathway to college (p. 239). These teachers were described as being “rigorous and highly relational, and often spent extra time with the participants to help them both academically and personally” (Kula, 2013, p. 239). Students are willing to go the extra mile for themselves when teachers demonstrate genuine and holistic care.

Finally, effective instructors also possess intrapersonal knowledge, defined as "the understanding of oneself and the capacity for introspection and reflection” (Collinson, 1996). Intrapersonal knowledge is important because teaching and coaching behavior is informed by the instructors’ subjectivities and personal dispositions – how he/she “sees, acts, and lives” (Collinson, 1996, p. 7). Teachers with high intrapersonal knowledge practice continuous learning and self-improvement, are reflective, have a well-developed ethic of care, and have a strong work ethic (Collinson, 1996). In their study of talented teenagers, Csikszentmihalyi et al. (1993b) also found evidence for the importance of instructors’ intrapersonal capability. The authors wrote, “While teens did require competence in their instructors, they did not demand omnipotence or the possession of star quality. What teens noticed instead were signs of an adult who had learned to enjoy the expression of talent as one vital ingredient in a meaningful, compelling way of life” (p. 195). In support of this view, Thoonen, Sleegers, Oort, Peetsma, and

Geijsel (2011) also found that the quality of instruction is more influenced by the teachers' ability and willingness to experiment and reflect, rather than the time they spend reading professional literature. In the classroom where there is typically limited accountability and contact with supervisors, teachers' intrapersonal knowledge helps them integrate their professional and interpersonal knowledge in ways that will benefit students the most.

Characteristics of effective instruction. While instructor characteristics focuses on the person (e.g., the instructors experience and qualifications), instruction characteristics focuses on what the instructor does (e.g., pedagogical style). Hence, the characteristics of effective instruction will largely be field-specific. With regard to leader development, McCauley et al. (2010) identifies three elements that make learning experiences more powerful for building leadership skills: assessment, challenge and support. Assessments help individuals identify their present performance level and their primary development needs (McCauley et al., 2010). As with all learning, leadership development is enhanced when tasks and assignments correspond to individuals' developmental needs and goals (Day, 2001). Similarly, in his study of talented individuals, Bloom (1985) highlights the importance of adjusting instructional goals, style, and content to reflect students' talent development stage. In the early years, for example, instructors typically focus on creating enjoyment of an activity by providing an abundance of extrinsic rewards such as praise, recognition, opportunities to perform or compete, and even candies (Bloom, 1985). In the later years, instructors will then focus more on refining skills and strengthening weaknesses (Bloom, 1985).

Leadership research also highlights the importance of "stretch" assignments that challenge individuals' capacities (Day, 2001; McCauley et al., 2010). According to McCauley et al. (2010), challenge motivates and provides an opportunity for individuals to develop by forcing

them out of their comfort zones - "the enemy of growth and continued effectiveness" (McCauley et al., 2010, p. 9). Similarly, in her study of gifted individuals, VanTassel-Baska (1998) argues that academically gifted students benefit from more flexible and challenging assignments - tasks that require skills or abilities one does not yet possess. Such assignments are typically marked with elements such as novelty, difficult goals, conflict, or adversity (McCauley et al., 2010). Challenging tasks require individuals to use higher order thinking skills that involve critical thinking, information processing, and decision-making – skills pertinent to leadership (Subotnik & White, 2006). Under challenging circumstances, individuals can learn and master new skills and strategies that contribute to their leadership development.

Finally, McCauley et al. (2010) highlights the importance of support, typically in the form of encouragement, companionship, and assistance from others. Support can also be embedded within an organizational system in the form of feedback, opportunities for collaboration, and learning resources. Feedback, for example, allows individuals to focus on mastery and learning instead of performance failure (Derue & Wellman, 2009). Effective feedback can be defined as "the amount of direct, clear information received directly from one's work about one's performance and effectiveness" (Firestone & Pennell, 1993, p. 503). Instruction that is followed by relevant feedback allow individuals to learn from their mistakes and victories in order to attain higher levels of mastery in their field.

Quantity of Instruction

Quantity of instruction refers to the amount of time spent learning in school or practicing in a talent domain (Paik, 2013). The number of schooling years and types of degrees is typically used to understand the extent of an individual's formal educational experience (Paik, 2013). The relationship between time and school learning is considered to be one of the most consistent

findings in educational psychology (Walberg, Niemiec, & Fredrick, 1994). In a syntheses of more than 376 largely US-based studies, Paik, Wang, and Walberg (2002) found that 88% demonstrated that time had a positive influence on learning. The following section examines how time spent learning or practicing influences the development of leader-related skills and characteristics.

Instructional time. According to educator John Carroll (1984), learning is a function of how much time was allowed and how much time was actually needed by the individual to master it. The actual time needed to learn something, in turn, is influenced by other factors such as ability, quality of instruction, the opportunity to learn, and motivation to persevere (L. W. Anderson, 1984; Carroll, 1984). Carroll (1984) was one of the first researchers to believe that all students can learn anything given enough time. Achievement gaps appear as a result of some students not having sufficient time to learn.

More recently, some scholars asserted that US students' poor performance on international standardized tests can be attributed to them having significantly less instructional time than students in high-performing countries (Fuligni & Stevenson, 1995; Haynes & Chalker, 1997; Paik, 2001; Stevenson & Stigler, 1994). For instance, Paik (2001) found that over the course of twelve years of basic education, South Korean students receive 50% more instruction each year than US students. US students also spend less time on schoolwork and homework outside of school (Fredrick & Walberg, 1980; Haynes & Chalker, 1997; Paik et al., 2002). Fuligni and Stevenson (1995), for example, found differences in academic achievement between US, Japanese, and Taiwanese students that can be explained in terms of the quantity of time spent in academic activities outside of school. Chinese and Japanese students were found to

spend more time studying, attending courses and reading for pleasure (Fuligni & Stevenson, 1995).

Despite the compelling evidence regarding the relationship between instructional time and learning, conclusions should be drawn with caution. Comparisons of instructional time between- and within-countries are often challenging because of inconsistencies in defining and measuring time. In a comparative meta-analysis of the effects of instructional time on learning, Scheerens (2014) found that Finland, a high-performing country on international standardized tests, had one of the shortest school hours in the data set – only about 608 hours per year for elementary and 690 hours per year in lower secondary. US 7th grade students, in comparison, spend about 1,016 hours in school (Desilver, 2014). Similarly, a US study examining student performance in states where less than 800 instructional hours per year was required found that students in half the states performed higher than the national average while students in the other half performed below the national average (Hull & Newport, 2011). The authors also noted that Vermont, a high-performing state, had the lowest required number of hours (700 hours) for elementary students (Hull & Newport, 2011). Research examining the impact of extended learning time on academic performance also found mixed results (Hendriks, Luyten, Scheerens, & Sleegers, 2014).

Deliberate practice. In contrast to earlier research viewing leadership as "a collection of inborn qualities that can be uncovered and measured" (Popper, 2000, p. 729), more recent research propose a skill-based approach to understanding leadership (Mumford et al., 2000). Mumford et al. (2000) suggest that, just like other forms of expertise, leadership capabilities are acquired in a progressive fashion. Hence, individuals with more opportunities to practice leadership skills will become better leaders than those who have had little or no practice

(Mumford et al., 2000). This line of thinking echoes contemporary research in achievement and talent development.

Ericsson, Krampe, and Tesch-Römer (1993) argue that what ultimately distinguishes novices from experts in any field is their engaged amount of deliberate practice. Deliberate practice is defined as "practice that focuses on tasks beyond your current level of competence and comfort" (Ericsson, Prietula, & Cokely, 2007). It is not the mere repetition of tasks, but rather an effortful and concentrated effort to improve one's specific weaknesses and extend the range of current strengths (Baron, 2009; Ericsson, Nandagopal, & Roring, 2009; Ericsson et al., 2007). In fact, researchers have found that individuals generally become experts only after at least ten thousand hours of deliberate practice (Ericsson et al., 1993). In short, while it is tempting to believe that the world's greatest leaders are born, research demonstrates that they are the product of countless hours of practice and hard work.

Environmental Factors

Outside of the school environment, other influences on leader development in childhood and adolescence include the *home environment*, *mentoring* relationships, *peer* relationships, and the use of *extracurricular time*. The importance of each varies with each developmental stage. The home environment, for example, plays the leading role during childhood. Peers and other adult mentors, on the other hand, exert a greater influence during adolescence and adulthood (A. M. Ryan, 2001).

Home Environment

The "curriculum of the home" constitutes patterns of family life and its influence on children's ability to learn (Paik, 2008, 2013, 2015; Redding, 2003; Walberg, 1984). It includes parent-child relationships, the routine of family life, family expectations and supervision, as well

as other family characteristics such as SES, size, and birth order (Paik, 2008). A large body of leader/leadership research has focused on the impact of parenting style and attachment on development. The following section will synthesize this body of research as well as note other features of the home environment that have been found to influence leader development.

Parenting styles, attachment, and practices. Research on parenting styles is largely based on the work of Baumrind (1971) who proposed three typologies of parenting: authoritative, authoritarian, and permissive. Authoritative parents are those who provide "independence with limits" (Murphy & Johnson, 2011, p. 463). They have clear and high standards for their children, are assertive but neither intrusive nor restrictive, and use supportive rather than punitive disciplinary measures (Murphy & Johnson, 2011). In contrast, authoritarian parents deprive children of autonomy and attempt to control every aspect of their children's life through forceful measures (Murphy & Johnson, 2011). Authoritative parenting style has been linked to the development of leadership in adolescents and adults (Avolio, Rotundo, & Walumbwa, 2009; Murphy, 2010; Popper, 2010). Adolescents with authoritative parents demonstrated higher levels of self-regulation and discipline; as adults, they were perceived by others as responsive and supportive leaders (Keller, 2003). Adolescents with authoritarian parents, on the other hand, developed low levels of confidence and poor communication skills, which resulted in poor leadership development (Keller, 2003). Chao (2001), however, warns that the positive impact of authoritative parenting on European American youth may not necessarily transfer to all groups, as noted in her study on Asian American youth. Hence, authoritative parenting "should not be treated as the prototype" for all groups (Chao, 2001, p. 1841). Chao's findings underscore the need for more research on diverse groups. In particular, more studies examining the impact of parenting practices on leader development is still needed.

Children's and adolescent's attachment styles have similarly been found to predict future leadership outcomes (Popper & Mayseless, 2003; Popper et al., 2000). Through the "Strange Situation" experiment, Ainsworth identified four attachment patterns in infants and their caregivers: secure, anxious-ambivalent, anxious-avoidant, and disorganized/disoriented[5] (Ainsworth, Blehar, Waters, & Wall, 2015). Children with secure attachment styles trust their caregivers and are confident that they will be available and responsive in times of need (Popper, 2010). As a result, they tended to be bolder in their explorations compared to children with other attachment patterns (Popper, 2010). Higher levels of social intelligence, self-esteem, and self-efficacy, which are essential elements of leadership have been associated with secure attachment styles (Ainsworth et al., 2015; Dornbusch, Ritter, Leiderman, Donald, & Fraleigh, 1987). Furthermore, individuals identified as transformational leaders also reported secure attachment styles with caregivers (Murphy, 2010). Adults who experienced secure attachment as children were also found to be more self-reliant and confident in their leadership roles (Berson, Dan, & Yammarino, 2006). Leaders with secure attachments have also been found to have healthier leadership approaches (i.e., ethical leadership) and more positive impact on their organizations (Mack et al., 2010).

In one of the few internationally published studies on Indonesian families, Zevalkink, Riksen-walraven, and Bradley (2008) concluded that the quality of the home environment, measured using the Home Observation for Measurement of the Environment (HOME) Inventory, impacted children's attachment styles. For instance, the authors found that infants and toddlers with an insecure-resistant attachment style tended to live in homes that scored lower on the HOME Inventory (Zevalkink et al., 2008). These homes were typically less safe, less organized,

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[5] The fourth attachment style, disorganized/disoriented, was added later by Ainsworth's colleague, Mary Main (Main & Solomon, 1990)

and had less materials for play (Zevalkink et al., 2008). Another contextual factor that contributed to a higher quality home environment was the proximity to mother's place of birth, highlighting the importance of social support from extended family (Zevalkink et al., 2008).

Parenting practices and children's motivation. While parenting styles and practices influence children in many ways, researchers have been particularly interested in understanding how they impact children's motivation, and more specifically, their academic motivation. A. E. Gottfried, Fleming, & Gottfried (1998) found that the home environment influenced children's academic achievement, and that this relationship was mediated by intrinsic motivation. From a self-determination theory perspective, intrinsic motivation can be maximized by promoting a sense of autonomy, competence, and relatedness (R. M. Ryan & Deci, 2000b). Examples of parenting practices that support these three needs include allowing children to make their own choices and solve their own problems, as well as reducing external pressures to perform or fulfill parent-determined goals (Grolnick, 2003). A study of Olympic athletes also found that parents provided "unconditional love and support with no pressure" (Gould, Dieffenbach, & Moffett, 2002, p. 196). Parents also provided motivation, imparted the value of commitment, and enforced a good amount of discipline. In their study of talented teenagers, Csikszentmihalyi et al. (1993b) similarly found that the parents provided their children with a combination of independence and supervision. Teens from complex families[6], in which individuals are allowed to develop their own individuality while at the same time experience support and connection with the family, experienced higher levels of enjoyment in their work (Csikszentmihalyi et al., 1993). Presumably, individuals who enjoy their work will dedicate larger amounts of time and

[6] In complex families, individuals are integrated (members are connected to and supportive of each other) and differentiated (members form individual identities and demonstrate independent thought and expression) (Csikszentmihalyi, Rathunde, & Whalen, 1997).

energy to the work and hence, achieve greater success and productivity. Similarly Goertzel, Goertzel, Goertzel, & Hansen (2004) emphasized the importance of encouraging children to pursue their own interests in order to develop independence in thought and action.

Prior to formal schooling, most children spend the majority of time at home. Hence, the *curriculum of the home* plays a critical role in both talent and leader development (Paik, 2013). The eminent adults in Bloom's study mentioned that their parents were responsible for introducing them to the talent field, providing them with early instruction, and also encouraging and supporting their interests early on (Bloom, 1985). In addition, parents were also cited as the ones who espoused and enacted values and habits that would be crucial to later success in the field. Many of the individuals indicated that their parents instilled values such as having strong work ethic, a love for learning, perseverance, and excellence (Bloom, 1985). Similarly, parents are often the first to identify children's leadership potential and have the opportunity to directly cultivate leader-related skills through role modeling and direct teaching.

Other characteristics of the home. Studies of prominent leaders have identified familial factors such as birth order, family size, and parental resources to be correlates of leadership potential and performance (Bass & Bass, 2008). For example, a study of government leaders in the Netherlands found an overrepresentation of firstborns and only-childs (Andeweg & Van Den Berg, 2003). Similarly, in his study of American presidents and vice-presidents, British prime ministers, American Nobel Laureates, and American scientists, Albert (1980) noted that the majority were firstborns. Albert (1980), however, argues that it is more accurate to use the term "special family position" rather than birth order since the latter can be changed by unexpected circumstances (such as a sibling's death). Children in the "special family position"

tend to receive more attention and resources from parents and other family members that provides an advantage for their talent development.

A family's socioeconomic status (SES), typically measured by parental income or education level, also play a role in children and adolescent development. In general, higher family SES is most often associated with higher levels of achievement and talent development (M. A. Gottfried & Ream, 2014; Walberg & Tsai, 1983). SES has also been found to be associated to caregiver sensitivity as well as attachment style. Zevalkink et al. (2008), for instance, found that family SES was strongly related to the quality of the home environment. Nonetheless, due to contextual and cultural variations, the relationship between family SES and student achievement may look different in developed and developing countries (Heyneman, 1980). Researchers argue that typical proxies for SES, such as parental education level and income, are easy to measure but do not represent actual practices in the home (Tomlinson & Andina, 2015).

In a quantitative study using Indonesian data, Johnstone and Jiyono (1983) concluded that actual practices and values in the home were more important than parents' educational levels, parents' employment, and what possessions were available in the home. Examples of supportive home characteristics include encouraging the child to study and providing access to resources such as books, magazines, or newspapers. Similarly, in their study of eminent individuals, Goertzel, Goertzel, Goertzel, and Hansen (2004), found a majority of homes with "a love for learning in one or both parents, often accompanied by a physical exuberance and a persistent drive towards goals" (p. 282). A study of female mathematics Olympians also found that their the childhood homes were often described as places where "learning was meritable, permissible, encouraged, and even targeted as essential" (Bittman, 2008, p. 193). The

intellectual stimulation and resources present in the home environment provides children with the opportunity and means to grow their talents and interests.

Peers

As children mature, peers and social networks play an increasingly important role in development (Paik, 2013). While parents typically play a more prominent role in childhood, peers become more influential in adolescence (Pinker, 2003; A. M. Ryan, 2001). By middle childhood, peers also make up more than 30% of children's social interactions, while parental supervision occur less frequently than in early childhood (Gifford-Smith & Brownell, 2003). This section will examine the influence of peers on leader development and important features of peer relationships.

Peer influence on leader development. Research on peer relationships in childhood and adolescence demonstrate that supportive peers impact leadership effectiveness and emergence in significant and positive ways (Komives et al., 2005). While often difficult to quantify, studies in education have also found that peers directly and indirectly influence student outcomes (Zimmer & Attridge, 2014). Peers can also provide encouragement and motivation that is essential for leadership effectiveness and emergence (Guerin et al., 2011). Adolescents' social contexts also influence the development of extraversion and communication skills (Komives et al., 2005). In terms of talent development, positive peers have been found to positively influence behavior while negative peers can have a negative influence on behavior. For example, one study found that children who spent more than 30% of their social time with aggressive peers obtained higher aggression ratings from teachers after three months (Snyder, Horsch, & Childs, 1997).

Several theories have been forwarded to explain how peers influence children's behavior. According to the affiliation/shaping model, for example, children actively associate with similar

peers and those peers, in turn, shape their behaviors (Cairns, Cairns, Neckerman, Gest, & Gariepy, 1988). An alternative view, referred to as reciprocal socialization, asserts that children embrace "the behaviors, attitudes, and values that are similar to those with whom they have had recurrent interactions" (Farver, 1996, p. 345). The nature of the peer relationship – how stable, how long, and how intimate - is also an important determinant of how the relationship influences the child. For example, a child would be more influenced by a peer s/he meets daily than one s/he only meets sporadically. While the precise mechanics and direction of the peer effect is often unclear, research documents the influential role that peers have in childhood.

Features of peer relationships. Research demonstrates that children are more likely to associate with those who are similar. Children not only prefer peers of the same gender and similar age (Challman, 1932; Snyder et al., 1997), they also prefer peers that will reinforce their preferred behaviors (Farver, 1996; Snyder et al., 1997). For example, researchers found that aggressive children tend to actively seek out children with similar levels of aggression (Farver, 1996; Snyder et al., 1997). Boys and girls also seem to have different priorities when choosing friends: boys prioritized age, sociality (degree of cooperative play), and physical activity (in order); girls prioritized social participation, age, sociality, and physical activity (in order) (Challman, 1932).

Children's social skills also influence their status and interactions in a peer group. For instance, "popular" children tend to display prosocial behaviors such as engaging in cooperative play, remaining connected in conversation, and displaying positive affect more often than "rejected" or "neglected" children (Walker, 2009). Another interesting aspect to consider is an individual's relative age to his/her peers. Bedard and Dhuey (2006) found that children born early in the school year, or who are older in their grade, tend to be more academically successful

all through college than those who are younger. Similarly, in their study of leadership in adolescence, Dhuey and Lipscomb (2008) found that the oldest students in the cohort were four to eleven percent more likely to become high school leaders.

Peer mentoring. Leadership studies demonstrate that peers can be an effective source of personal and leader development (Crisp, Baker, Griffin, Lunsford, & Pifer, 2017). Kram and Isabella (1985), for instance, consider peer relationships to be a better alternative to traditional mentoring with older adults. The authors argue that peer mentoring tend to last longer - while a mentoring relationship typically lasts between three to six years, peer relationships often span as long as twenty to thirty years or more. Peer mentors have been found to be more effective in developing specific leader-related characteristics, for instance, commitment and collaboration (Dugan & Komives, 2007, 2010; Greenfield, Keup, & Gardner, 2013). Frequency of peer conversations on meaningful topics (e.g., social issues or political ideologies) have been found to positively correlate with socially responsible leadership characteristics (Dugan & Komives, 2010). Additionally, peer mentors become more important as individuals progress in their leader development journeys (Komives et al., 2009). Peer mentoring benefits both mentor and mentee in terms of solidifying and progressing their leadership identities (Komives et al., 2005). For instance, peer mentors reported experiencing increased self-awareness, resource utilization, problem-solving ability, and a stronger sense of purpose (Lin, Lai, Chiu, Hsieh, & Chen, 2016).

As with traditional forms of mentoring, peer mentoring can be conducted formally or informally. For examples, universities can establish peer mentoring programs that match older students with younger students to assist younger students in adjusting to university life. Many programs also pair university students with high school students to provide assistance and guidance in the college application and transition process. Alumni of Indonesia Mengajar also

serve as peer mentors to teachers currently deployed in remote areas. Many times, peer mentoring develop organically through interactions between individuals in clubs, events, and other settings. Due to the importance of mentoring, the next section will expound further into its role and function.

Mentoring

Rhodes (2002) defines mentoring as "a relationship between an older, more experienced adult and an unrelated, younger protégé - a relationship in which the adult provides ongoing guidance, instruction, and encouragement aimed at developing the competence and character of the protégé" (p. 3). In most cases, mentoring is a relationship between a novice and a more experienced person in the same field. Parents, peers, instructors, faculty members, academic advisors, and other school personnel may serve as mentors formally or informally. The mentor-mentee relationship is arguably one of the most important relationships an individual could have in his/her career as mentors are typically key providers of guidance, instruction, motivation, and support in the field (Paik et al., 2019). This current section will review the impact of mentoring on leader development, and more specifically leader identity. Additionally, the characteristics of effective mentors will also be discussed.

Mentoring, coaching, and advising. Although often used interchangeably, mentoring, coaching, and/or advising are unique in their scope, purpose, and function in leader development. Mentoring, coaching, and advising are ongoing processes rather than a one-time event; however, mentoring typically spans for the longest duration (Day, 2001). Hastings and Kane (2018) argue that it is important to be able to distinguish the three developmental interactions in order to optimize its impact and effectiveness. The authors define the three terms in this way:

> *Mentoring* for leadership development is a long-term, one-on-one dynamic process of role modeling and reflection designed to amass knowledge, skills, and self-confidence for personal development and leadership empowerment. *Coaching* for leadership development is a formal, one-on-one individualized process designed to develop understanding of leadership behaviors and the impact of those behaviors for improved personal and/or organizational leadership effectiveness. *Advising* for leadership development is a structured relationship between students and leadership educators built around the need to support thriving student organizations that contribute to the educational environment. (p. 18)

The success of all three interactions is dependent upon a positive relationship between mentor/coach/advisor and student. Furthermore, all three also involve key components of leader development interventions identified in previous studies: assessment, challenge, and support (Van Velsor & McCauley, 2004). Since the PGM defines *mentoring* broadly as “formal or informal guidance and support in skill-building” (Paik et al., 2019, p. 6), the term *mentoring* will be used to encompass all aspects of mentoring, coaching, and advising.

Role of mentoring in leader development. Many studies have demonstrated the importance of mentoring in leader development (Campbell, Smith, Dugan, & Komives, 2012; Dugan & Komives, 2007, 2010). More specifically, mentoring has been found to be important and effective for personal development and leadership empowerment (Campbell et al., 2012; Lin et al., 2016). Mentoring for leader development has been associated with benefits such as increased skills, knowledge, self-awareness, confidence, and self-efficacy, motivation to lead, well-being, and cognitive flexibility (Ely et al., 2010; Korotov, 2016; Passmore, 2015). In their study of student leadership, Campbell et al. (2012) found that mentoring accounted for a

significant amount of variance in college leadership outcomes and was also a significant predictor of leadership capacity. Support from mentors have also been found to positively correlate with adolescents' perceptions of their own leadership skills (Hancock, Dyk, & Jones, 2012).

Nora and Crisp (2007) identified four types of support provided by mentors: psychological and emotional support, goal-setting and career support, academic subject knowledge support, and role modeling. Mentors play an integral role in providing the psychological and emotional support necessary to identify and build leadership potential and identity (Campbell et al., 2012). They also help students advance in their studies and careers by providing assessments, feedback, and challenge (Campbell et al., 2012). Additionally, mentors may also write recommendation or nomination letters needed to access specific opportunities. Academic support from mentors include providing access to key individuals in a field, assistance in exploring career interests, and apprenticeship opportunities (Crisp & Cruz, 2009; Komives et al., 2005). Having previously gone through the path the mentee is on, mentors can offer help in navigating a field and providing access to additional resources (Bloom, 1985; Pleiss & Feldhusen, 1995). Furthermore, mentors can also help mentees evaluate their skills objectively and set realistic goals so that they can continue progressing in their chosen career or field (Casey & Shore, 2000). Finally, mentors may also serve as powerful role models and guides for effective leadership (Komives et al., 2005).

Impact of mentoring on leadership identity. Studies have shown that mentors play an important role in leader identity formation. As mentioned previously, leader identity is developed when individuals incorporate beliefs about being a leader into their self-conception (Priest et al., 2018). The development of one's leader identity has been found to be one of the

most important predictors of effective leadership and career success (Day & Harrison, 2007). Interactions with mentors - including parents, teachers, and peers – influence students' perceptions of self and others, their definitions and beliefs about leadership, their ability to communicate and collaborate with others, and their sense of identity.

Mentors, coaches, and advisors contribute differently at every stage of leader identity development (LID) (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006). In the first stage, mentors often point out diverse leaders and leadership styles, help to identify their mentee's interests and strengths, and affirm their mentee's involvement in various activities. In the second stage, mentors focus on strengthening the mentees' self-confidence and self-efficacy, while also encouraging greater involvement in various activities of interest. In the third stage, mentors provide opportunities for mentees to take on leadership roles and responsibilities. In the fourth stage, mentors help mentees to improve their communication skills so they can work more collaboratively with others. In the fifth stage, mentors begin to train their mentees to supervise/mentor others. In the final stage, mentors assist in reflection about leadership and facilitate processes to develop a more authentic leadership style. These stages serve as examples as leader development requires growth over time.

Characteristics of effective mentoring relationships. Researchers have not agreed upon a single list of characteristics common among effective mentors (Hastings & Kane, 2018). In other words, just like parenting, there is no one-size-fits-all formula for effective mentoring. Nonetheless, studies point to several characteristics found in many successful mentoring relationships. Through a qualitative study of mentors, Allen and Poteet (1999), for instance, found that the three most often mentioned characteristics of effective mentors were: 1) listening and communication skills, 2) patience, and 3) knowledge of the organization and industry. The

authors also highlight the importance of having trust, open communication, and a common set of standards and expectations (Allen & Poteet, 1999). Other studies found that effective mentors were considered trustworthy and respectful (Noe, Greenberger, & Wang, 2002), authentic and open (Lucas, 2001) and sensitive and empathic (Spencer, 2006). A genuine close relationship between mentor and mentee has been found to be foundational to mentoring relationships in various talent areas (Bloom, 1985; Casey & Shore, 2000).

The impact of mentoring depends on a variety of factors – mentor characteristics, mentee characteristics, and context. Studies have also found that mentor type influenced outcomes related to leadership (Campbell et al., 2012). For example, students mentored by a student affairs personnel were more likely to demonstrate socially responsible leadership characteristics compared to those mentored by faculty members. Other research highlights the importance of mentees and mentors sharing similar values, interests, and personality styles (Allen & Eby, 2003; Burke, McKeen, & McKenna, 1993). Other studies found that mentoring impacts different mentees differently. For instance, mentoring was found to impact international students more than domestic students (Shalka, 2016). Thompson (2012) found that female students reported higher contributions from their mentors on their leader development compared to male students. Several studies have also found that when students were permitted to choose their own mentors, they tended to select mentors from the same race, gender, or cultural background (Liang & Grossman, 2007; Nettles & Millett, 2006; Sanchez, Colon-Torres, Feuer, Roundfield, & Berardi, 2005). Although there remains a shortage of studies on which mentor-mentee combination (i.e., cross-race or same-race, cross-gender or same-gender) is most effective, what is clear from the research is mentor effectiveness depends on the characteristics as well as context of mentoring.

Extracurricular Time

Although children and adolescents spend significant amounts of time in school, they actually spend most of their waking hours in the first eighteen years of life outside of school (Paik, 2013; Walberg, 1984). The average child in the US, for example, spends only 13% of their waking time in school and 87% outside of school (Walberg et al., 1994). Hence, it is equally, if not more important to examine out-of-school time use and its impact on achievement and leader development.

Out-of-school time use. Every person is each endowed with exactly twenty-four hours in a day and must decide on how that time is spent. Aside from extending academic learning time**,** children's out-of-school time also serve as potential platforms for learning important socio-emotional and leader-related skills (Hoffeth & Sandberg, 2001; Larson & Verma, 1999). Activities such as reading, enrichment classes, and sports, have been found to benefit children and adolescents' development (Larson & Verma, 1999; OECD, 2012). Additionally, spending time with the family and having dinner together also positively contributes to healthy development and adjustment (Hofferth & Sandberg, 2001). In contrast, excessive television-viewing, electronic media usage, and online surfing may negatively impact students' achievement (Walberg, 1988). Adolescents in OECD countries, for example, spend about two hours online (i.e., browsing the internet for leisure, participating in social networks, chatting online, and downloading music, film, or games) each day (OECD, 2016). The study reported that students who spend above six hours per day online outside of school were more likely to report feeling lonely at school, arrive late at school, and perform at lower levels in mathematics (OECD, 2016). Extended screen time have also been found to impact sleep, physical health, and social well-being (OECD, 2016). The availability of various technology for children and

adolescents also mean that they are spending less time reading – an activity that has been shown to have psychological and cognitive benefits for children (Hofferth & Sandberg, 2001; Hutton, Horowitz-Kraus, Mendelsohn, DeWitt, & Holland, 2015; Paik, 2004).

The way children and adolescents spend their out-of-school time may be indicative of what the families or societies deem as important. A comparative study of adolescent time use in in Minneapolis, Taipei, and Sendai found that adolescents in the three cultures all spent time studying, socializing, and watching TV (Fuligni & Stevenson, 1995). What differed between the three cultures and what made a difference in their academic achievement was the emphasis placed on each activity. While the East Asian students spent a majority of their out-of-school time in academic pursuits, US students spent most of their time doing chores and working outside the home (Stevenson & Stigler, 1994). Fuligni and Stevenson (1995) found that while 80% of US students held part-time jobs, only 26% of Chinese students and 27% of Japanese students did so. Furthermore, nearly all of the Chinese and Japanese students who worked were enrolled in vocational high school and had jobs that were related to their vocational training (Fuligni & Stevenson, 1995). US students also spent more time in leisure than their peers in East Asian countries (Fuligni & Stevenson, 1995). The researchers estimate that US students spend about 80% more time socializing than studying outside of school compared to their East Asian peers (Fuligni & Stevenson, 1995). Consistent with these findings, Larson and Verma (1999) assert that students in East Asia have higher academic achievement levels than their US counterparts because they spend more time in academic-related programs and activities.

Cultural values and norms influence the types of out-of-school activities children and adolescents are involved in, and also whether that activity contributes positively or negatively to their development. A study by Hofferth and Sandberg (2001) found that Asian children tend to

spend more time in educational activities at home, while African American children spend more time in church activities, and Hispanic children spend more time in family activities such as eating and doing chores. It is also more common to find Asian mothers supervising children's homework and monitoring their out-of-school time use compared to European mothers (Paik, 2004; Larson & Verna, 1999). Furthermore, due to cultural differences in the emphasis placed on certain activities, studies have found that participation in sports and paid labor had a positive impact on US students, but not South Korean students (Paik, 2001).

Participation in extracurricular activities. Participation in organized extracurricular activities, whether school or non-school based, has been found to influence adolescent psychosocial development and predict future leader development (Bartone et al., 2007). Larson (2000) argues that extracurricular activities should be given "*equivalent status* to school, family and peers as a focal of context development" (Larson, 2000, p. 178). The author asserts that participation in sports and other structured activities allow students to develop initiative – an important leader-related skill. Similarly, Reichard and Paik (2010) assert that active engagement in activities that provide leadership opportunities may "accelerate leadership development beyond what an adult organizational training program will do" (p. 315). In other words, since leadership is learned by leading, the more individuals practice leading, the better leaders they would become (Kouzes & Posner, 2016).

Out-of-school programs become even more important in light of school structures that are generally unsupportive for talent development (Bloom & Sosniak, 1981). Students who find learning in schools difficult might thrive under more flexible and favorable conditions offered by out-of-school programs (Danish, 2000). For instance, the talented individuals in Bloom's (1985) study mentioned participating in summer camps, competitions, and out-of-school instruction that

were formative to their talent development. Research has also shown that children who participate in more out-of-school programs have higher contributions to the family, school, and community at large (Zarrett & Lerner, 2008). In addition, these students also score higher on positive youth development scales (Ramey & Rose-Krasnor, 2012; Zarrett & Lerner, 2008).

Structured activities such as sports can have a positive impact on children's cognitive and emotional development (Hofferth & Sandberg, 2001). Involvement in sports have been found to be particularly beneficial to leadership development in youth, particularly students in the United States (Paik, 2008). Participants in youth sports programs have been found to demonstrate higher levels of initiative, emotion regulation, and teamwork (Larson, Hansen, & Moneta, 2006). Chelladurai (2010) argues that many sports-related skills are transferable to adult leadership situations. These skills include envisioning, intellectualizing, cultivating self-efficacy as well as being self-interested, disciplined, competitive, task and goal-oriented, and enjoying the flow experience (Chelladurai, 2010).

Conclusion

Research on leader and leadership development highlight the various ways in which individual aptitude, school, and environmental factors influence leader-related outcomes. The current study will examine how the ten factors outlined in the PGM, along with unique contextual factors, interact to nurture leader-related skills and capacities in *Indonesia Mengajar's* recruits.

CHAPTER III: METHOD

Research Design

This study utilized a mixed-method design to explore the individual aptitude, school, and environmental factors in the early to later years that influenced the development of Indonesian teacher leaders. Because of the comprehensive approach of the Productive Giftedness Model (PGM), both quantitative and qualitative methods were necessary for this design. While most of the primary data were derived from a qualitative interview protocol, a quantitative online survey was used to supplement participants' responses. The survey consists of two parts, a demographic section and a PGM factor section, and these will be described in detail in the next chapter. Creswell (2018) writes that both methods are helpful in triangulating data sources and getting a fuller picture of participants' experiences.

A qualitative tool was selected as the primary source of data since many researchers have documented its usefulness for exploring novel issues or topics (Creswell, 2013; Krathwohl, 2009). According to Creswell (2018), qualitative methods allow researchers to develop a more nuanced and detailed understanding about topics that has yet to be studied extensively. The shortage of studies on leader development in Indonesia makes the qualitative approach suitable in this regard. Furthermore, the open-ended nature of qualitative approaches helps to minimize power differences between researcher and subjects by providing individual participants with the opportunity to freely express their experiences (Creswell, 2018). The structured interview protocol allows researchers to ask pre-set questions based on the theoretical framework, but also permits participants to express their unique point of views and experiences.

While the qualitative portion of the study is helpful for collecting thick narrative responses, a quantitative tool was also necessary to collect additional data for specific PGM

factors. For instance, the *Quantity of Instruction* and *Extracurricular Time* factors require more precise answers related to time usage. Questions for these factors are best captured in a survey since participants can select responses on likert scales, multiple-choice, or drop-down menu. This mixed-method approach will help fill the need for more comprehensive accounts of individual leader development. Descriptive data will be used to answer questions about "who, what, where, when, and to what extent" the ten PGM factors influenced the development of the Indonesian teacher leaders (Loeb et al., 2017, p. 39). The quantitative data will supplement the qualitative data, the primary instrument in the study, which answers questions about the *why* and *how*.

Sample

Since its founding in 2009, *Indonesia Mengajar* has sent fourteen batches of 40 to 75 teachers each to remote areas across Indonesia. These teacher leaders were chosen by *Indonesia Mengajar* after undergoing a highly selective recruitment process. All IM recruits are under 29 years old, unmarried, and have earned at least a bachelor's degree at the time of assignment. The majority earned their degrees in fields outside of education; for example, business, engineering, psychology, religious studies, and economics. Some had full-time jobs prior to joining IM, while others just completed their university education. A large proportion of the recruits come from Java, but in more recent years, more recruits have come from other smaller cities across Indonesia. A total of 38 alumni of *Indonesia Mengajar* were interviewed for the study and completed the online survey.[7] The only requirements for participation were: 1) their status as a

[7] Forty-one participants were interviewed, but three interviews were omitted from the study due to language and technical difficulties

selected teacher leader, 2) completion of the one-year IM deployment, and 3) fluency in the English language.

Description of Participants

Table 2 lists the participants in order of when their interviews were conducted. To protect their identity, a pseudonym was assigned to each participant and used throughout this report. Table 3 summarizes the sample characteristics. Participants' ages ranged from 24 to 36 years old. The mean age was 29.16 years old. The sample consisted of 22 female and 16 male participants. All participants earned their Bachelor's degrees and thirteen participants completed their Master's degrees. More than 70% of participants were Muslim, which is reflective of the Indonesian population. More than half of the participants identified as Javanese.

Table 2

Participant Demographics (n=38)

Pseudonym	Year of Birth	Gender	Ethnicity	Religion	Highest Education Level	Interview Length	Interview Format
Brenda	1990	F	Javanese	Muslim	Bachelor's	1:44:13	In-person
Robby	1987	M	Acehnese	Muslim	Master's	1:08:49/3:14:03	In-person
Amanda	1988	F	Javanese	Muslim	Master's	3:14:03	In-person
Leon	1988	M	Javanese	Muslim	Bachelor's	1:42:50	Online
Muthia	1990	F	Minang	Muslim	Master's	1:25:31	In-person
Sarah	1986	F	Minang/Malay	Muslim	Master's	2:07:42	In-person
Annisa	1988	F	Javanese	Muslim	Bachelor's	2:15:15	Online
Kirana	1986	F	Chinese/Batak	Christian	Master's	1:59:58	In-person
Henry	1992	M	Chinese	None	Bachelor's	0:54:03	Online
Maria	1995	F	Batak	Christian	Bachelor's	1:51:53	In-person
Aulia	1987	F	Minang	Muslim	Bachelor's	1:36:42	Online
Michael	1988	M	Javanese	None	Master's	1:26:49	Online
Michelle	1987	F	Javanese	Catholic	Master's	1:51:04	In-person
Cindy	1988	F	Javanese	Muslim	Bachelor's	1:33:55	In-person
Amelia	1993	F	Javanese	Muslim	Bachelor's	1:59:15	In-person

Pseudonym	**Year of Birth**	**Gender**	**Ethnicity**	**Religion**	**Highest Education Level**	**Interview Length**	**Interview Format**
Zulfikar	1992	M	Javanese	Muslim	Bachelor's	1:13:32	Online
Yanuar	1994	M	Sundanese	Muslim	Bachelor's	2:06:13	Online
Rika	1992	F	Javanese	Muslim	Bachelor's	1:47:04	Online
William	1990	M	Javanese	Muslim	Master's	1:42:43	In-person
Anna	1983	F	Javanese	Muslim	Master's	2:23:12	In-person
Pricilla	1986	F	Mixed	Muslim	Master's	1:56:31	Online
Bayu	1990	M	Batak	None	Bachelor's	1:44:52	In-person
Samuel	1983	M	Javanese	Muslim	Bachelor's	0:47:26	In-person
Rahmat	1993	M	Chinese	Christian	Bachelor's	1:14:36	In-person
Audrey	1990	F	Javanese	Muslim	Bachelor's	1:30:55	In-person
Rama	1992	M	Javanese/Minang	Muslim	Bachelor's	1:39:37	In-person
Bella	1992	F	Chinese	Christian	Bachelor's	1:11:21	Online
Yessica	1995	F	Malay	Muslim	Bachelor's	0:54:56	In-person
Musa	1991	M	Javanese	Muslim	Bachelor's	1:27:19	Online
Dinda	1988	F	Javanese/Sundanese	Muslim	Master's	1:46:35	Online
Jasmine	1993	F	Malay	Muslim	Bachelor's	1:18:19	Online
Alana	1992	F	Javanese	Muslim	Bachelor's	1:44:38	Online
Eka	1988	M	Sundanese/Batak	Christian	Bachelor's	1:20:07	Online
Arief	1993	M	Minang	Muslim	Bachelor's	1:26:32	In-person
Rafi	1986	M	Javanese	Muslim	Master's	1:12:59	In-person
David	1987	M	Javanese	Muslim	Master's	1:40:18	In-person
Dewi	1989	F	Sundanese	Muslim	Bachelor's	0:58:53	Online
Alya	1992	F	Javanese/Sundanese	Muslim	Bachelor's	0:58:30	In-person

Table 3

Sample Demographics (n=38)

Category	**Description**	**Frequency**	**Percentage of Sample**	**Mean**	**SD**
Age				29.16	2.93
Highest Education Level				2.66	.48
	Bachelor's/S1	25	65.8		
	Master's/S2	13	34.2		
Religious Affiliation				4	1.14
	Buddhist	0	0		
	Christian Protestant	5	13.2		
	Hindu	0	0		

Category	Description	Frequency	Percentage of Sample	Mean	SD
	Muslim	29	76.3		
	Roman Catholic	1	2.6		
	Other	0	0		
	None	3	7.9		
Gender				1.58	.50
	Female	22	57.9		
	Male	16	42.1		
Ethnicity				NA	NA
	Batak	4	10.5		
	Chinese	4	10.5		
	Javanese	21	55.3		
	Malay	2	5.3		
	Minang	5	13.2		
	Sundanese	5	13.2		
	Other (Acehnese, Manado, and mixed)	3	7.9		

Protection of Human Subjects

The study received full IRB approval from Claremont Graduate University before the researcher initiated any contact with the sample. The entire nature of the study, the requirements for participation, and potential risks associated with participation, including loss of time, were fully disclosed to protect the subjects of the study. Participants were asked to sign an informed consent form prior to completing the online survey (Appendix C). Participants were also allowed to resign from the study at any point and refuse to answer any of the questions during the interview while remaining in the study. Participation in the study was voluntary and there were no ramifications for non-participation. Interviews were audio-recorded, but in order to maintain confidentiality only the researcher had access to the audio files. Similarly, only the researcher had access to survey responses. All audio files and written records, including notes and transcriptions, have been handled with confidentiality and care, as per IRB regulations. Pseudonyms were used to mask participants' identities in all written records.

Instrumentation

The mixed-method design used both qualitative and quantitative instruments. The PGM Interview Protocol, Factor Survey, and Demographic Survey are described in more detail in the following sections (Paik, forthcoming)[8].

Qualitative Instrument

PGM Interview Protocol. The primary data source for this study came from an in-depth, structured interview with each participant. An interview protocol developed by Paik (forthcoming) and modified for the Indonesian sample was used as the primary instrument (Appendix D). The protocol was developed based on initial quantitative and qualitative research, an extensive literature review, a rigorous process of consensus-building that demonstrated inter-rater reliability, and pilot studies (Paik, 2013, 2015, forthcoming). The protocol was designed to be administered to high-achieving individuals from a variety of talent domains, including leadership. The modified protocol (i.e., Indonesian version) consisted of 39 main questions with 88 sub-questions. Questions were mostly retrospective in nature and required participants to provide answers based on past experiences in childhood, adolescence, and adulthood. More specifically, using the life-span perspective, participants were asked to describe their experiences in terms of their early and elementary school years (Pre-K to 12), secondary school years (junior high and high school), pre-professional years (college and graduate school), and professional years (as applicable based on the participant's experiences). Questions were arranged primarily according to the PGM factors (*Development* – 4, *Mentoring* – 4, *Home* – 4, *Quality of Instruction*

[8] *Permission was granted to use the PGM interview protocol, surveys, and accompanying materials for this study:* Paik, S. J. (forthcoming). Productive Giftedness Model Manual and Instruments. In S. J. Paik, *Nurturing Productive Giftedness*. Cambridge, UK: Cambridge University Press.

– 5, Learning Climate – 2, *Ability* – 3, *Motivation* – 5, *Extracurricular Time* – 1, *Peers* – 1, *Contextual Factors* – 3) and further categorized under more specific subheadings to improve flow. For example, subheadings for the *Home Environment* factor include Community Experience, Home Life: Climate, Responsibilities, and Values, and Parents: Styles, Involvement, and Expectations. Each item may also be relevant to more than one PGM factor. A section on *Life and Work Productivity* (1 main question) and *Concluding Questions* (4 main questions) were also included at the end of the interview. Questions about how the Indonesia Mengajar experience influenced participants' leadership development were also added in the modified version of the protocol (2 main questions).

The standardized nature of the interview ensures greater consistency in terms of data collection and analysis across all participants. Whenever possible, questions were asked in the same order according to the protocol. Nonetheless, the researcher also maintained a degree of flexibility in order to build rapport and provide a safe space for participants to share their stories (Flick, 2011). In a few instances, participants were also permitted to use Bahasa Indonesia as needed, and these portions of the interview were later translated by the researcher. Each interview was approximately one to two hours in length.

Quantitative Instrument

The online survey was based on the surveys developed by Paik (forthcoming) and modified for the Indonesian population (Indonesian version). The PGM surveys were developed under similar rigorous procedures as the interview protocol. The survey consists of two sections: 1) a PGM demographic section, and 2) a PGM factor section (Appendix E). Each section contained a combination of general and conditional questions. General questions were provided for every participant while conditional questions only appeared in the survey if participants

selected certain responses. For instance, participants who indicated they attended graduate school were asked to answer additional questions relating to experiences in graduate school. The survey consisted of multiple-choice questions (single answer and multiple answers) and text entry questions. The two sections (administered as one survey) took around 30 to 40 minutes to complete. The survey was administered using *Qualtrics* software.

PGM Demographic Survey. This section collected information on participants' formal educational experiences, childhood family background, and other individual demographic information. Demographic information included gender, year of birth, ethnicity, country of origin, religious affiliation, and languages spoken (9 items). The educational background section covered the developmental stages: preschool (1 items), elementary (7 items), secondary (7 items), undergraduate (9 items), and graduate school (8 items for each degree). Questions that appeared in the educational background section were tailored to the participant's indicated level of schooling. Childhood family information included parents' marital status, parents' educational attainment, childhood family socioeconomic status, and family religious affiliation (6 items). The modified demographic survey (Indonesian version) contained a total of 40 general (for all participants) and 15 conditional (only when applicable) questions.

PGM Factor Survey. This section collected additional information relating to talent development (not obtained through the interview protocol). The questions centered around the *Home Environment* (7 general items), *Quantity of Instruction* (12 general items and 3 conditional items), and *Extracurricular Time* (71 general items and 87 conditional items) factors of the PGM. Questions were mainly retrospective in nature, but several questions inquired about participants' current professional life experiences. The majority of the items involved choosing from a five-point likert scale. The PGM factor survey consisted of 90 general (for all

participants) and 21 conditional (only when applicable) questions. As with the interview protocol, the questions examined participants' experiences during early childhood (preschool) to adulthood (professional years). This lifespan perspective was necessary to identify the nuances of each developmental stage and document changes from one stage to another.

Pilot Test

A pilot test was conducted to assess the suitability of the instruments for the Indonesian population. Participants (N=5) in the pilot were English-speaking IM alumni. The participants were recruited through purposive and snowball sampling with Indonesian leaders, including IM alumni. Five individuals were asked to participate in the structured interview and complete the online survey. Additional individuals (N=54) were asked to complete only the online survey to ensure content validity and reliability of the questions. The scales held consistently at .70 and above. Upon completion of the interview and online survey, participants were asked to provide feedback regarding the clarity of the questions and offer other suggestions for improving the instrument for the Indonesian context. The findings from the pilot study helped to assess better survey and interview questions before full implementation of the study.

Procedures

Upon IRB approval, the researcher contacted *Indonesia Mengajar* to recruit participants for the pilot and actual study. At the suggestion of the organization, IM's executive director sent out an email to the IM alumni list-serve explaining the goals and significance of the study and encouraging participation. Those who were interested and met the study's criteria (i.e., has completed the one-year IM deployment and can communicate in English comfortably) were asked to click on a link to fill out their basic information (see Appendix F). The ten-item questionnaire asked participants for basic information such as year of birth, gender, religious

affiliation, batch, current location, and contact information. This questionnaire was completed within 5 minutes.

Participants who completed the questionnaire then received a follow-up email with further information about the study. The email included information on the following: 1) the purpose of the study, 2) the nature of participation, 3) participants' rights and protection, 4) procedures for participating in the study, 5) informed consent form, and 6) contact information for further questions (Appendix G). In the email, participants were provided with a link to schedule their in-person or video interview at their earliest convenience (depending on their current location). In the email, participants were also given a link to the online survey, which was to be completed at least three days prior to the interview. At the beginning of the survey, participants were reminded to read and sign the electronic consent form. A reminder to complete the survey was sent one week prior to the interview. The researcher also regularly sent out reminders to complete the survey for participants who had already been interviewed.

Interviews were conducted in-person (in DKI Jakarta) or online, depending on the participant's current location. Online interviews were conducted using the Zoom video-conferencing platform whenever possible. Participants living in the Jakarta area were asked to choose one of several interview locations. Nearly all of the in-person interviews were conducted in the private meeting rooms of a local co-working chain (GoWork).[9] At the beginning of the interview, the researcher thanked participants, reviewed participants' rights in the study, and allowed participants to ask any clarifying questions regarding the study. The researcher reminded participants that the interview would be audio-recorded and that notes would be taken during the interview process. At the end of the interview, the researcher also requested

[9] Two interviews were conducted in private meeting rooms at the participants' workplace.

permission to contact participants again for further follow-up or data clarification. The interviews were transcribed within one week of the interview. Once all the interviews were completed, the transcriptions were then emailed to each participant for member-checking. Several participants wrote back to clarify responses and answer the researcher's queries. No new information was added.

Data Analysis

Qualitative Data Analysis

All qualitative data analysis was conducted using MaxQDA software. Once interviews were transcribed, they were uploaded into the MaxQDA software for coding and analysis. The researcher then read through each transcript several times to become immersed and familiar with participants' "voices", as recommended by Creswell (2018). First cycle coding was primarily aimed at data organization. Responses for each qualitative item was assigned a code based on the question number.[10] Since the interviews were structured, codes typically followed the same sequence. However, on several occasions, participants' responses were also categorized under one or more codes. For instance, a response to one question may also be applicable to another question in the interview protocol. Hence, the response would receive two (or more) codes.

The MaxQDA software allows researchers to retrieve and compare responses based on the assigned codes. The second step in the data analysis process was identifying the salient themes and responses within each qualitative item. Hence, second cycle coding focused on grouping responses based on similarity and assigning a thematic code to each group. The thematic codes within each item were then tabulated to obtain frequencies. Tables were then

[10] Codes and coding procedures, including quantitative items that require reverse coding, are provided in the PGM Manual and Instruments (Paik, forthcoming).

created for each qualitative item to summarize participants' responses and highlight the salient themes and patterns. In the results section, 2-3 key themes for each qualitative item were highlighted. Special attention was also given to highlight commonalities and differences between participants for each sub-factor at each level of development (early childhood to adulthood).

Quantitative Data Analysis

All quantitative data was analyzed using IBM SPSS statistical software (Version 25). Upon completion of all surveys, the quantitative data was downloaded from the Qualtrics platform. Since this study uses "leadership" as the "dependent variable" (or productive outcome) based on a purposive sampling (high-achieving leaders), only descriptive analysis was performed. Upon ensuring that there were no systematic patterns in the missing data, descriptive analysis was performed to summarize participants' responses. Means, standard deviations, and basic frequencies/percentages were reported for each quantitative item. The quantitative data was then categorized under one or more PGM factors to supplement the qualitative findings.

Reliability Analysis

A reliability analysis of the ordinal variables in the PGM factor survey was performed to determine whether the scales measured the same underlying construct.[11] Cronbach's alpha was used to assess scale reliability (Field, 2005). The Cronbach's alpha coefficient ranges from 0 to 1. Higher coefficients (i.e., approaching 1) indicate higher reliability of the subscales. Values between .7 to .8 have been suggested as values that indicate good reliability (Field, 2005). Whereas values under .3 are considered to signify poor reliability (Field, 2005). Table 4

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[11] More information on the items and reliability analyses can also be found in the PGM Manual and Instruments (Paik, forthcoming).

summarizes the results of the reliability analysis. As shown below, the *Extracurricular Time* variables, combined according to school level (elementary, secondary, undergraduate, graduate, and professional), demonstrate strong reliability at .70 or above.[12] The *Home Environment* variables (opportunities, support, and resources; learning resources) also demonstrate good internal reliability at .73 and above.

Table 4

Reliability Analysis Results

Subfactor	Variables Included	Alpha
Home Environment - Opportunity, Support, and Resources (Childhood)	S1.2_H_CF_Childhood_Opportunities S1.2_H_CF_Childhood_Support S1.2_H_CF_Childhood_Resources	.796
Home Environment - Opportunity, Support, and Resources (Adulthood)	S1.3_H_CF_Adult_Opportunities S1.3_H_CF_Adult_Support S1.3_H_CF_Adult_Resources	.730
Home Environment - Learning Resources	S1.1_H_Learning_Books S1.1_H_Learning_Newspapers S1.1_H_Learning_Computer S1.1_H_Learning_Smartphone S1.1_H_Learning_Electronic S1.1_H_Learning_Internet S1.1_H_Learning_Desk S1.1_H_Learning_Room S1.1_H_Learning_Tutoring S1.1_H_Learning_Supplies S1.1_H_Learning_Instruments S1.1_H_Learning_Games S1.1_H_Learning_Other	.762
Extracurricular Time – Elementary	S2.1_ET_Elem_Per_Day_Studying S2.1_ET_Elem_Per_Day_Reading S2.1_ET_Elem_Per_Day_Friends S2.1_ET_Elem_Per_Day_Family S2.1_ET_Elem_Per_Day_TV_Educational S2.1_ET_Elem_Per_Day_TV_Leisure S2.1_ET_Elem_Per_Day_Tech_Educational S2.1_ET_Elem_Per_Day_Tech_Leisure S2.2_ET_Elem_Per_Week_Academic S2.2_ET_Elem_Per_Week_Community S2.2_ET_Elem_Per_Week_Religious S2.2_ET_Elem_Per_Week_Hobby S2.2_ET_Elem_Per_Week_Sports	.717

[12] Even when variables were separated into smaller scales, the alpha coefficient estimate remains above .65, indicating good internal reliability. These findings are also consistent with Paik's earlier reliabilities on PGM scales.

	S2.2_ET_Elem_Per_Week_Leadership S2.2_ET_Elem_Per_Week_Arts S2.3_ET_Elem_Sleeping S2.4a_ET_Elem_Job_Paid S2.4b_ET_Elem_Job_Unpaid S2.5_QT_ET_Elem_Developing_Leadership S2.6_QT_ET_Elem_Leadership_Training S2.7_QT_ET_Elem_Competitions	
Extracurricular Time – Secondary	S3.1_ET_Sec_Per_Day_Studying S3.1_ET_Sec_Per_Day_Reading S3.1_ET_Sec_Per_Day_Friends S3.1_ET_Sec_Per_Day_Family S3.1_ET_Sec_Per_Day_TV_Educational S3.1_ET_Sec_Per_Day_TV_Leisure S3.1_ET_Sec_Per_Day_Tech_Educational S3.1_ET_Sec_Per_Day_Tech_Leisure S3.2_ET_Sec_Per_Week_Academic S3.2_ET_Sec_Per_Week_Community S3.2_ET_Sec_Per_Week_Religious S3.2_ET_Sec_Per_Week_Hobby S3.2_ET_Sec_Per_Week_Sports S3.2_ET_Sec_Per_Week_Leadership S3.2_ET_Sec_Per_Week_Arts S3.3_ET_Sec_Sleeping S3.4a_ET_Sec_Job_Paid S3.4b_ET_Sec_Job_Unpaid S3.5_QT_ET_Sec_Developing_Leadership S3.6_QT_ET_Sec_Leadership_Training S3.7_QT_ET_Sec_Competitions	.759
Extracurricular Time – Undergraduate	S5.1_ET_Undergrad_Per_Day_Studying S5.1_ET_Undergrad_Per_Day_Reading S5.1_ET_Undergrad_Per_Day_Friends S5.1_ET_Undergrad_Per_Day_Family S5.1_ET_Undergrad_Per_Day_TV_Educational S5.1_ET_Undergrad_Per_Day_TV_Leisure S5.1_ET_Undergrad_Per_Day_Tech_Educational S5.1_ET_Undergrad_Per_Day_Tech_Leisure S5.2_ET_Undergrad_Per_Week_Academic S5.2_ET_Undergrad_Per_Week_Community S5.2_ET_Undergrad_Per_Week_Religious S5.2_ET_Undergrad_Per_Week_Hobby S5.2_ET_Undergrad_Per_Week_Sports S5.2_ET_Undergrad_Per_Week_Leadership S5.2_ET_Undergrad_Per_Week_Arts S5.2_ET_Undergrad_Per_Week_Vocational S5.3_ET_Undergrad_Sleeping S5.4_ET_Undergrad_Job_Paid S5.5_QT_ET_Undergrad_Developing_Leadership S5.6_QT_ET_Undergrad_Leadership_Training S5.7_QT_ET_Undergrad_Competitions	.709
Extracurricular Time – Graduate	S6.1_ET_Grad_Per_Day_Studying S6.1_ET_Grad_Per_Day_Reading S6.1_ET_Grad_Per_Day_Friends	.853

	S6.1_ET_Grad_Per_Day_Family S6.1_ET_Grad_Per_Day_TV_Educational S6.1_ET_Grad_Per_Day_TV_Leisure S6.1_ET_Grad_Per_Day_Tech_Educational S6.1_ET_Grad_Per_Day_Tech_Leisure S6.2_ET_Grad_Per_Week_Academic S6.2_ET_Grad_Per_Week_Community S6.2_ET_Grad_Per_Week_Religious S6.2_ET_Grad_Per_Week_Hobby S6.2_ET_Grad_Per_Week_Sports S6.2_ET_Grad_Per_Week_Leadership S6.2_ET_Grad_Per_Week_Arts S6.2_ET_Grad_Per_Week_Vocational S6.3_ET_Grad_Sleeping S6.4_ET_Grad_Job_Paid S6.5_QT_ET_Grad_Developing_Leadership S6.6_QT_ET_Grad_Leadership_Training S6.7_QT_ET_Grad_Competitions	
Extracurricular Time – Professional	S7.1_ET_Prof_Per_Day_Studying S7.1_ET_Prof_Per_Day_Reading S7.1_ET_Prof_Per_Day_Friends S7.1_ET_Prof_Per_Day_Family S7.1_ET_Prof_Per_Day_TV_Educational S7.1_ET_Prof_Per_Day_TV_Leisure S7.1_ET_Prof_Per_Day_Tech_Educational S7.1_ET_Prof_Per_Day_Tech_Leisure S7.2_ET_Prof_Per_Week_Community S7.2_ET_Prof_Per_Week_Religious S7.2_ET_Prof_Per_Week_Hobby S7.2_ET_Prof_Per_Week_Politics S7.2_ET_Prof_Per_Week_Sports S7.2_ET_Prof_Per_Week_Arts S7.2_ET_Prof_Per_Week_Vocational S7.3_ET_Prof_Sleeping S7.4_ET_Prof_Job_Paid S7.5_QT_ET_Prof_Developing_Leadership S7.6_QT_ET_Prof_Leadership_Training S7.7_QT_ET_Prof_Competitions	.795

Limitations

The study has several limitations that may constrain the generalizability of the findings. Firstly, the sampling frame consisted of only individuals who have completed the *Indonesia Mengajar* program. These individuals may systematically differ from other individuals with high leadership capacity who did not choose to participate (or were not selected) in IM. Hence, the developmental trajectories of IM recruits may not be generalizable to all individuals with

high leadership capacities. Furthermore, due to purposive sampling, self-selecting sample bias may have occurred since participants who volunteered to be in the study may be systematically different from those who did not. Additionally, since the majority of the sample came from Muslim backgrounds, the experiences and perspectives of individuals from other religious and racial backgrounds may not be represented in the findings.

The study also relied primarily on participants' retrospective accounts of their developmental experiences (individual factors, school factors, and environmental factors) and may not necessarily reflect actual experiences at home, in school, etc. Data triangulation by interviewing parents and teachers of participants would strengthen the accuracy of the reports but it is beyond the scope of the current study. Since all the instruments were administered in English, criteria for participating in the study included the ability to communicate in English comfortably. Hence, non-English speaking IM alumni could not be included in the study. As a result, a degree of selection bias may have occurred. Non-English speaking IM alumni may have had different leader development experiences that was not accounted for in the findings. Furthermore, although the participants selected for the study spoke English quite fluently, some meanings and nuances might have been lost in translation. Nevertheless, as the first comprehensive study to examine leader development from a lifespan perspective, findings from this study can serve as a useful starting point for future studies examining leader development.

CHAPTER 4: RESULTS

The purpose of this study is to examine the individual aptitude, instructional, and environmental factors in the early to later years that influenced the development of young Indonesian leaders. The mixed-method design utilized a qualitative interview protocol as the primary instrument. A quantitative online survey was also administered to supplement participants' narratives. The final sample included 38 individuals.[13] This chapter presents the results from the quantitative and qualitative instruments. Results from the online survey are presented first, arranged according to question number. Results from the semi-structured interviews are organized according to the ten factors in the Productive Giftedness Model (PGM). Findings related to contextual factors, the Indonesia Mengajar (IM) experience, and other leadership-related questions follow after findings related to the PGM factors. The chapter ends with a summary of major findings within each PGM factor.

Quantitative Data

The online survey consisted of two surveys – a demographic survey and a PGM factor survey. The demographic survey focused on collecting basic educational and childhood information, while the PGM factor survey included questions relating to the *Home*, *Quantity of Instruction*, and *Extracurricular Time* factors in the PGM.

Demographic Survey

Participants were asked to complete questions about their formal education experience (preschool to graduate school, if applicable) and childhood family background. Basic

[13] Forty-one individuals completed the interview and survey, however, only 38 were included in the final analysis due to technical and language difficulties.

demographic information was also collected and this information is presented in the Methods section (Chapter 3).

Elementary and secondary education. Table 5 details participants' preschool and elementary education experiences. To gauge how early participants began their formal education, they were asked whether they attended preschool. Half of the participants reported attending preschool. All but one participant reported attending either public (57.9%) or private 39.5%) general elementary school. These schools are regulated and monitored by the Ministry of Education and Culture. Only one participant reported attending a private *madrasah*, Islamic religious schools under the supervision of the Ministry of Religious Affairs. All participants reported attending either public general secondary schools (78.9%) or private general secondary schools (21.1%).

Table 5

Elementary and Secondary Educational Background

Variable	**Elementary (*N* = 38)**		**Secondary (*N*= 38)**	
	Frequency	**%**	**Frequency**	**%**
Attended preschool				
Yes	19	50	-	-
No	19	50	-	-
Type of school				
Public general	22	57.9	30	78.9
Private general	15	39.5	8	21.1
Public madrasah	0	0	0	0
Private madrasah	1	2.6	0	0
Other	0	0	0	0
Attended top-ranking school				
Yes	19	50.0	31	81.6
No	19	50.0	7	18.4
Type of calendar year				
Year-round (12 months)	30	78.9	36	94.7
Traditional (9 months)	7	18.4	2	5.3
Other	1	2.6	0	0
Grades mostly received				
A (i.e., 91-100)	20	52.6	13	34.2
B (i.e., 71-90)	17	44.7	24	63.2
C (i.e., 51-70)	1	2.6	1	2.6

Variable	Elementary ($N = 38$)		Secondary ($N = 38$)	
	Frequency	**%**	**Frequency**	**%**
D or lower (i.e., <51)	0	0	0	0
My school did not give grades	0	0	0	0
Types of accelerated programs and fellowships [a]				
Academic	18	47.4	19	50.0
Arts and music	10	26.3	8	21.1
Service and leadership	13	34.2	19	50.0
Sports	7	18.4	6	15.8
Other	2	5.3	2	5.3
None	10	26.3	6	15.8
Awards and scholarships received [a]				
Academic awards	20	52.6	17	44.7
Arts and music awards	3	7.9	4	10.5
Service and leadership awards	5	13.2	11	28.9
Sports awards	1	2.6	1	2.6
Other awards	2	5.3	4	10.5
None	14	36.8	14	36.8
Identified as gifted/talented				
Yes	24	63.2	16	42.1
No	14	36.8	22	57.9

Notes. [a] *Item allows participants to select more than one answer choice*

During elementary school, only half of participants attended a top-ranked school. In contrast, 81.6% reported attending a top-ranked secondary school. Participants were generally above average students throughout elementary and secondary school. The majority reported earning mostly A's and B's for both elementary and secondary school. Only one participant reported receiving mostly C's during elementary and secondary school. Approximately half reported participating in academic accelerated programs in elementary and secondary school. Service and leadership programs were the second type of accelerated programs, followed by arts and music programs. Similarly, around half received academic awards and scholarships in elementary and secondary school. Finally, 63.2% and 42.1% reported being identified as gifted/talented during elementary and secondary school, respectively.

Undergraduate and graduate education. As previously mentioned, all 38 participants had earned their bachelor's degrees. 16 participants indicated that they attended or are currently

in graduate school. 13 had completed their master's degrees and the remaining three are currently working towards their master's degrees.[14] Calculations for the graduate school variables will be based only on those who indicated they attended graduate school (*n*=16). All but two participants completed their undergraduate education in Indonesia. The two participants who graduated from a foreign university completed their undergraduate training in Japan and Singapore. In contrast, only four participants earned their graduate degrees from an Indonesian university. Five went to graduate school in the United States and seven participants attended graduate school in other countries (i.e., Germany, Japan, Norway, Sweden, the Netherlands, UK, and a combined program in UK, Malta, and Estonia).

Table 6

Undergraduate and Graduate Educational Background

Variable	**Undergraduate (*N*=38)**		**Graduate (*n*=16)**[b]	
	Frequency	**%**	**Frequency**	**%**
Did you attend an undergraduate school?				
Yes	38	100.0	-	-
No	0	0	-	-
Did you attend graduate school?				
Yes	-	-	16	100.0
No	-	-	22	-
Type of degree or certificate earned				
Doctoral degree	-	-	0	0
Master's degree	-	-	13	81.25
Bachelor's degree	38	100.0	-	-
Associate degree	0	0	-	-
Technical certificate	0	0	-	-
Incomplete	0	0	3	18.75
Location of university				
Indonesia	36	94.7	4	25
Australia	0	0	0	0
United States	0	0	5	31.25
Malaysia	0	0	0	0
Other	2	5.3	7	43.75

[14] During the data analysis stage, it was discovered that an additional three participants were currently in graduate school (two pursuing master's degrees, and one pursuing a doctoral degree). However, due to ambiguity in the question wording (i.e., "Did you attend graduate school?"), half of the participants currently in graduate school answered *yes*, while the remaining half answered *no*.

Variable	Undergraduate (N=38)		Graduate (n=16)[b]	
	Frequency	%	Frequency	%
Type of undergraduate institution				
Public	33	86.8	12	75
Private	5	13.2	4	25
Name of undergraduate institution (Top 5 by frequency)				
Institut Teknologi Bandung	8	21.05	-	-
Universitas Indonesia	5	13.16	-	-
Universitas Gadjah Mada	4	10.53	-	-
Universitas Airlangga	2	5.26	-	-
Universitas Negeri Jakarta	2	5.26	-	-
Primary major				
Business	8	21.1	2	12.5
Health Sciences	1	2.6	0	0
Humanities	3	7.9	0	0
STEM	16	42.1	3	18.75
Social Sciences	9	23.7	8	50.0
Visual and Performing Arts	0	0	0	0
Vocational	0	0	0	0
Double major	1	2.6	2	12.5
Degree related to current occupation?				
Yes	24	63.2	13	81.25
No	14	36.8	2	12.5
Grades mostly received				
A	18	47.4	8	50.0
B	20	52.6	5	31.25
C	0	0	1	6.25
D or lower	0	0	0	0
My school did not give grades	0	0	1	6.25
Types of accelerated programs or fellowships [a]				
Academic	17	44.7	6	37.5
Arts and music	8	21.1	2	12.5
Service and leadership	27	71.1	9	56.25
Sports	4	10.5	0	0
Other	5	13.2	2	12.5
None	6	15.8	2	12.5
Awards and scholarships received [a]				
Academic awards	26	68.4	6	37.5
Arts and music awards	5	13.2	1	6.25
Service and leadership awards	14	36.8	5	31.25
Sports awards	1	2.6	0	0
Other awards	6	15.8	1	6.25
None	6	15.8	5	31.25

Notes. [a] *Item allows participants to select more than one answer choice.* [b] *Percentages were calculated based on those who attended graduate school (n=16)*

The majority of participants chose STEM-related fields for their undergraduate training (42.1%). In contrast, nearly half of those who attended graduate school were in the Social Sciences. Only 63.2% said their undergraduate major is related to their occupation, while 81.25% of those who attended graduate school said that their graduate major is related to their current occupation. For both undergraduate and graduate school, participants reported receiving mostly A's and B's. Nearly three-quarters of participants were involved in service and leadership programs and fellowships in their undergraduate years, and more than half were involved in service and leadership programs and fellowships in graduate school. More than half had also earned academic awards and scholarships during undergraduate and graduate school. Interestingly, only one person reported receiving a sports award/scholarship during university and none received a sports award/scholarship in graduate school.

Childhood family background. Participants were asked to answer demographic questions related to their childhood. These include questions about their parents' marital status, education level, family SES, and family religious involvement. The majority (84.2%) reported that their parents were married for most of their childhood. Three participants reported their parents being widowed and another three reported their parents being divorced.

Table 7

Childhood Family Background (N = 38)

Variable	Frequency	%
Parents' marital status during childhood		
Married	32	84.2
Widowed	3	7.9
Divorced	3	7.9
Separated	0	0
Never married	0	0
Father's Education Level		
Doctoral/S3	2	5.3
Master's/S2	7	18.4
Bachelor's/S1	10	26.3
Associate degree	2	5.3
Trade/technical/vocational training	3	7.9

Variable	Frequency	%
High school graduate, diploma or equivalent	5	13.2
Some schooling completed	5	13.2
No schooling completed	4	10.5
Mother's Education Level		
Doctoral/S3	1	2.6
Master's/S2	2	5.3
Bachelor's/S1	10	26.3
Associate degree	9	23.7
Trade/technical/vocational training	3	7.9
High school graduate, diploma or equivalent	6	15.8
Some schooling completed	5	13.2
No schooling completed	2	5.3
Family SES		
Upper class	2	5.3
Middle class	25	65.8
Working class	11	28.9
Family religious affiliation		
Buddhist	1	2.6
Christian Protestant	4	10.5
Hindu	0	0
Muslim	31	81.6
Roman Catholic	2	5.3
Other	0	0
None	0	0
Family religious involvement		
Practicing	28	73.7
Nominal	10	26.3
None	0	0
Languages spoken at home		
One language (Bahasa Indonesia)	21	55.26
One language (dialect)	8	21.05
Two languages	8	21.05
Three languages	1	2.6

Parents' highest education levels ranged from no schooling to doctoral degrees. Half of the fathers had a bachelor's degree or higher. In contrast, 34.21% of mothers had a bachelor's degree or higher. All but two participants grew up in either working class (28.9%) or middle-class families (65.8%). Working class was defined as typically having hourly wage positions, generally lower education levels, home renters, and occupations that involve physical work or

little control in the workplace. Middle class was defined as having college or some education, salaried professionals and managers, or having home ownership.

Since every Indonesian citizen is mandated to declare a religious affiliation, participants were asked about their family's religious involvement growing up. The majority (81.6%) reported growing up in Muslim families, closely reflecting the Indonesian population, where 87.2% are Muslims (CIA World Factbook, 2019). All participants also reported that their families had some level of religious involvement. Most (73.7%) grew up in families that practiced their religion regularly (i.e., frequent and regular participation in religious activities), while the rest grew up in families that practiced their religion nominally (i.e., infrequent and irregular participation in religious activities). More than half grew up speaking Bahasa Indonesia, the national language, at home. Others spoke only their dialect (21.05%) or a combination of Bahasa Indonesia and their dialect (21.05%).

PGM Factor Survey

In addition to the demographic questions, participants were asked to respond to questions related to the *time* and *opportunities/support/resources* in the PGM (Paik, 2013; Paik et al., 2019).

Learning resources in the home. Table 8 reports the types of educational resources and opportunities available in the home of participants while growing up. The top three resources that participants reported having were books (89.5%), newspapers and magazines (63.2%), and a study desk/table (44.7%). Few participants had access to technology (e.g., smartphones, electric devices, and the internet), perhaps because they were not readily available at the time.

Table 8

Educational Resources and Opportunities at Home

Variable	Frequency	%

Books (excluding school books)	34	89.5
Newspapers and magazines	24	63.2
Computer and tablet	15	39.5
Smartphone	3	7.9
Other electronic devices	9	23.7
Internet access	7	18.4
Study desk/table	17	44.7
Own room	15	39.5
Tutoring	14	36.8
Art supplies and construction materials	9	23.7
Musical instruments	13	34.2
Strategy or board games	14	36.8
Other	2	5.3

Access to opportunities, support, and resources. Table 9 reports the means and standard deviation for access to leadership-related opportunities, support, and resources on a five-point likert scale (i.e., never, rarely, sometimes, often, and very often) that was then scored (from one to five) in ascending order. Frequencies and percentages can be found in Table H1 (Appendix H). *Opportunities related to leadership* include internships, specialized training, summer programs, or out-of-school enrichment programs that helped to develop leadership skills. *Influential people related to leadership* include eminent adults, master teachers, instructors, coaches, or other leaders. *Resources related to leadership* include specialty magazines and books, computer software, and other helpful resources.

Table 9

Access to Opportunities, Support, and Resources

Variable	**Growing up (*n*=38)**		**Now (*n*=38)**	
	Mean	***SD***	**Mean**	***SD***
Access to opportunities related to leadership	**2.55**	1.267	**3.89**	.831
Access to influential people related to leadership	**2.37**	1.051	**4.00**	.870
Access to resources related to leadership	**2.82**	1.136	**4.39**	.638

In general, participants reported having more access to leadership-related opportunities, support, and resources now than while they were growing up. Resources related to leadership were the most readily available while growing up (M = 2.82, SD = 1.136) and now (M = 4.39,

SD = .638). For example, participants reported *rarely* to *sometimes* having access to opportunities and influential people related to leadership while growing up. However, the majority reported being able to access leadership-related resources *sometimes* and *often* while growing up. Currently, participants report having access to influential people (*M* = 4.00, *SD* = .870) and resources related to leadership (*M* = 4.39, *SD* = .638) *often* and *very often*.

Extracurricular time use. To examine how participants used their time outside of school, they were asked to indicate how much time on average they spent on various daily and weekly activities. Each variable was rated on a five-point likert scale scored in ascending order from one to five (i.e., none = 1, 0 to 1 hours = 2, 2 to 3 hours = 3, 4 to 5 hours = 4, and more than 5 hours = 5). Table 10 reports the means and standard deviations for extracurricular time use from the elementary through the professional years. Refer to Table H2 to H6 (Appendix H) for frequencies and percentages.

Table 10

Extracurricular Time Use

Variable	Elementary (*N*=38)		Secondary (*N*=38)		Undergraduate (*N*=38)		Graduate[a] (*n*=16)		Professional (*N*=38)	
	Mean	***SD***	**Mean**	***SD***	**Mean**	***SD***	**Mean**	***SD***	**Mean**	***SD***
Daily activities										
Homework/ Coursework/ Studying	2.68	.933	3.21	1.044	3.92	1.010	4.38	.806	2.34	.815
Reading (leisure)	2.39	.755	2.76	.786	3.00	.972	2.50	.894	2.42	.889
Spending time with friends	2.97	.915	3.05	.957	3.19	.877	2.56	.727	2.24	.786
Spending time with family	3.39	.916	3.13	.875	2.22	.886	1.81	1.167	2.26	1.155
Watching TV (educational)	2.13	.741	2.05	.695	1.59	.599	1.69	.793	1.50	.762
Watching TV (leisure)	2.68	.809	2.47	.797	1.89	.737	1.75	.683	1.61	.638
Technology	1.63	.852	2.05	.804	2.89	1.022	3.19	.834	2.63	1.101

Variable	Elementary (*N*=38)		Secondary (*N*=38)		Undergraduate (*N*=38)		Graduate[a] (*n*=16)		Professional (*N*=38)	
	Mean	***SD***	**Mean**	***SD***	**Mean**	***SD***	**Mean**	***SD***	**Mean**	***SD***
(educational)										
Technology (leisure)	1.82	.955	2.16	.886	2.7	.939	3.19	.911	2.74	1.107
Weekly activities										
Academic clubs/activities	2.34	1.258	3.03	1.174	2.73	1.446	2.63	1.628	-	-
Community service clubs/activities	1.71	.898	2.34	1.341	2.92	1.498	2.75	1.732	2.82	1.353
Religious clubs/activities	2.92	1.496	2.39	1.220	2.11	1.220	2.38	1.586	1.92	1.343
Hobby & special interest clubs/activities	1.89	1.119	2.37	1.261	2.73	1.262	2.69	1.302	2.13	1.189
Political & civic clubs/activities	-	-	-	-	-	-	-	-	1.55	1.005
Sports & fitness clubs/activities	1.87	1.143	1.82	1.087	1.76	1.038	2.19	1.377	2.03	.972
Student leadership clubs/activities	1.68	1.016	2.97	1.325	3.49	1.48	2.75	1.571		
Visual & performing arts clubs/activities	1.71	.835	1.95	1.335	1.86	1.29	1.94	1.063	1.50	.952
Vocational & professional associations/ activities	-	-	-	-	1.81	1.151	1.94	1.237	1.97	1.325

Notes. [a]*Percentages were calculated based on those who indicated they attended graduate school (n=16)*

On average, participants spent the most time *studying* during their graduate years, reporting an average of four to five hours per day (M = 4.38, SD = .806). Most participants reported *doing homework/studying* between zero to one hour a day during their elementary school years, and between two to three hours a day in their secondary school years. Participants also spent around an hour or less daily in *reading for leisure* throughout their elementary to

professional years. *Spending time with friends* peaked during the undergraduate years (*M* = 3.19, *SD* = .877), with participants reporting spending around two to three hours with friends daily. *Spending time with family* - approximately two to three hours daily -was at its highest during the elementary school years (*M* = 3.39, *SD* = .916) and lowest during the graduate school years (*M* = 1.81, *SD* = 1.167) - none to less than an hour daily - perhaps because many were studying abroad.

Trends in television-watching and technology-usage may reflect the availability of specific kinds of technology during various time periods. Time spent *watching TV (educational/ work-related)* generally decreased from the elementary school years (*M* = 2.13, *SD* = .741) to the professional years (*M* = 1.50, *SD* = .762). Similarly, time spent *watching TV for leisure* also decreased from the elementary school years (*M* = 2.68, *SD* = .809) to the professional years (*M* = 1.61, *SD* = .638). In contrast, time spent in *technology (educational/work-related)* increased from elementary (*M* = 1.63, *SD* = .852) to the professional years (*M* = 2.63, *SD* = 1.101). Time spent in *technology (leisure)* also increased from elementary (*M* = 1.82, *SD* = .955) to the professional years (*M* = 2.74, *SD* = 1.107). The decrease in television-viewing might be the result of an increase in the availability of other technology (i.e., internet) and social media outlets (i.e., Instagram, Facebook, YouTube). In elementary school, participants spent about the same time *studying* and *watching TV (leisure)*. However, as undergraduate students, participants spent significantly more time *studying* (*M* = 3.92, *SD* = 1.010) than *watching television (leisure)* (*M* = 1.89, *SD* = .737) or using *technology (leisure)* (*M* = 2.7, *SD* = .939).

During the elementary school years, participants spent close to two to three hours weekly in *religious clubs/activities* (*M* = 2.92, *SD* = 1.496). Interestingly, participation in *religious clubs/activities* showed a downward trend with time. By the time they entered the professional

years, participants reported spending less than an hour a week in *religious clubs/activities* (*M* = 1.92, *SD* = 1.343). During the secondary school years, participants spent the most time in *academic clubs/activities* (*M* = 3.03, *SD* = 1.174) and *student leadership clubs/activities* (*M* = 2.97, *SD* = 1.325). During the undergraduate years, they were most active in *community service clubs/activities* (*M* = 2.92, *SD* = 1.498) and *student leadership clubs/activities* (*M* = 3.49, *SD* = 1.48). Similarly, participants were most active in *community service clubs/activities* (*M* = 2.75, *SD* = 1.732) and *student leadership clubs/activities* (*M* = 2.75, *SD* = 1.571) during the graduate school years, but to a lesser extent. As professionals, participants reported being most active in *community service clubs/activities* (*M* = 2.82, *SD* = 1.353). Involvement in sports/fitness and visual/performing arts clubs/activities remained relatively low throughout the elementary through professional years.

Time spent sleeping, working, and developing leadership. Participants were asked to indicate the amount of time they spent sleeping, working, and developing their leadership during their elementary through professional years. For each variable, participants were presented with five answer choices that were then given ratings from one to five in ascending order. Answer choices for questions related to sleep and work varied for elementary/secondary and undergraduate/graduate/professional (see Table notes). Table 11 presents the means and standard deviations for each variable during the elementary through professional years. Frequencies and percentages can be found in Table H7 and H8 (Appendix H).

Table 11

Hours Spent Sleeping, Working, and Developing Leadership

Variable	Elementary (*N*=38)		Secondary (*N*=38)		Undergraduate (*N*=38)		Graduate[a] (*n*=16)		Professional (*N*=38)	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Sleeping per day[b]	2.87	.906	2.05	.837	1.70	.740	2.88	1.204	3.00	1.040

Working (paid) per week[c]	1.34	1.097	1.37	.998	2.86	1.058	1.63	.619	3.61	.823
Working (unpaid) per week[c]	1.76	1.051	1.71	1.228	-	-	-	-	-	-
Developing leadership per day	1.82	.865	2.45	.891	2.86	1.058	2.44	.727	3.16	1.305
Attending leadership-related training or instruction per week	1.55	.602	2.03	.854	2.27	.769	2.31	.873	2.47	1.224
Participating in competitions, presentations, or other events that demonstrated or acknowledged leadership per year[d]	1.76	.751	2.18	.834	2.59	1.117	2.43	1.168	2.55	1.155

Notes. [a]*Percentages were calculated based on those who indicated they attended graduate school (n=16)* [b]*Answer choices ranged from six to ten hours for elementary/secondary, and four to eight hours for undergraduate/graduate/professional.* [c]*Answer choices ranged from none to more than 6 hours for elementary/secondary, and none to more than 60 hours for undergraduate/graduate/professional.* [d]*Answers are based on number of times (not hours)*

In general, time spent *sleeping* decreased with age and time spent working increased with age. Participants *slept* between seven to eight hours daily during elementary (M = 2.87, SD = .906) and secondary school (M = 2.05, M = 8.37). Participants reported *sleeping* the least during their undergraduate years, approximately four to five hours daily (M = 1.70, SD = .740). Most participants did not *work (paid/unpaid)* during their elementary and secondary school years. The majority of participants *worked* part-time during their undergraduate/graduate school years (between 1 to 20 hours) and full time (between 41 to 60 hours) during their professional years (see Table H8 in Appendix H).

In general, the amount of time participants spent *developing their leadership* increased with time. During the elementary school years (M = 1.82, SD = .865), participants reported spending less than an hour daily in *activities that involved the exercise of leadership skills* (e.g., organizational memberships, involvement in committees, event planning, and managing projects). As professionals, participants said they spend between two to three hours daily in

activities that help to develop their leadership (*M* = 3.16, *SD* = 1.305). Similarly, participation in leadership-related training or instruction also increased with time. During elementary school, participants spent less than an hour a week on *leadership-related training/instruction* (*M* = 1.55, *SD* = .602). In contrast, they spent between one to two hours weekly on *leadership-related training/instruction* during their professional years (*M* = 2.47, *SD* = 1.224). *Participation in competitions, presentations, or other events that demonstrated or acknowledged leadership* was highest during the undergraduate years (*M* = 2.59, *SD* = 1.117), and lowest in elementary school (*M* = 1.76, *SD* = .751).

Qualitative Data

Between four to six major recurring themes were identified for each qualitative item. Participants' responses were then categorized under one or more major theme. These were then tallied into frequencies and percentages to illustrate the pervasiveness of a theme. Unless otherwise stated, percentages (%) are calculated based on the entire sample (*N*=38). Due to the wealth of data, only two or three key findings for each item will be highlighted and discussed in the text. The remaining findings are reported in the tables presented.

Individual Aptitude Factors

Individual aptitude factors refer to characteristics that are typically unique to an individual. In the PGM, this includes *development*, *ability*, and *motivation*.

Development

Development of a skill or talent is a continuous process involving the interaction of numerous factors (Paik, 2013). Interview questions related to the *development* factor explored the leadership discovery process and how it was subsequently cultivated and personalized during the early through later years.

The process of leadership discovery. Table 12 outlines when, how, and whom aided in participants' leadership discovery process. Nearly half (44.74%) reported that their leadership ability was first discovered during the elementary school years. When asked about how leadership ability was discovered, the majority pointed to school-related tasks and activities. Nearly half (44.74%) indicated that they discovered their leadership ability by participating in school-based organizations and activities such as student senate, scouts, or the flag ceremony troop. Amelia described how joining organizations and groups such as the science club became formative to her leadership development:

> When I was in junior high school, I joined the science club. We participated in competitions and did experiments together and then we prepared for presentations together and then we won many competitions. I think that was the start of my leadership ability.

Another school-related theme was being appointed as class captain (18.42%). Starting from elementary school, teachers usually appoint a student to become the *ketua kelas* (class captain). Responsibilities include taking attendance, ensuring class cleanliness, keeping the class in order, and running various errands for the teacher.

Table 12

Leadership Discovery Process

Item	Theme	Frequency	%	Representative Quote
Tell me about how your first discovered your leadership. How old were you?	Elementary school	17	44.74	
	Junior/senior high school	10	26.32	
	College/university	8	21.05	
	After university	3	7.89	
How did you discover you had leadership ability?	Participated in school-based organizations and activities	17	44.74	I was really active in organizational activities since elementary school until high school, even in college.
	Appointed as class captain	7	18.42	When I was in elementary school, one of my teachers assigned me as the class captain, and my friends in the class voted for me. I don't know why. After that time, I felt that I can be a leader for my future, for the next year.

	Joined Indonesia Mengajar	3	7.89	As a Pengajar Muda, we were forced to become a leader whether we liked it or not…we led the teachers, we engaged the people, led the students and the youth in the village.
	Became a leader in study groups	2	5.26	Yes, through the group projects. If there was a group project, no one usually nobody wants to be the leader, but we need to have this one person to lead, so sometimes just I stepped up.
	Personal life events	2	5.26	I think one of the first tasks that was integral to my leadership was during my high school years. When I faced family challenges. My parents were getting divorced and I was facing uncertainties like where I will live, and everything. For a teenager, that was unclear how I should deal with that. You're finding your own ways of dealing with it and wrestling with questions that no one can give you the answers for.
Who played a role in helping you to discover your leadership?	Peers (including fellow young teachers during deployment)	15	39.47	I think my fellow Pengajar Muda in the same placement in Halmahera Selatan played an important role by giving me suggestions, criticism, and support.
	Teachers/professors	10	26.32	It was my teachers…I think they encouraged me a lot to be more active and not only become excellent in academics.
	Parents	5	13.16	So between my two parents, it built a character in me that I belong to the people, that I have to serve other people, and I have to be kind, not that we have to, it's just the right to do, be kind and help others.
	Other family members	2	5.26	In Aceh, that was my grandmother because I was really close to her. She paid great attention to me, taking care of me and providing me with advice to reach my dreams.
	Others (no specific person)	6	15.79	Confirmation from my surroundings from what I can remember. Like, "You can do it, you can." People around me were the ones pushing me, my friends especially. So, it is the conformity from my surroundings that kept saying, "I think you can do this," So I became confident. I became like, "Yes, yes, I can." I became more confident to move forward when I had that kind of environment.

Although the majority of participants discovered their leadership ability during their school years, three (7.89%) indicated that they only discovered they could lead after university, mainly by joining Indonesia Mengajar. Participants described how the one-year deployment to

remote villages across Indonesia made them realize their own capacity to lead and make an impact in others' lives. Furthermore, working mostly on their own in the village "forced" them to take on a leadership role as many in the village looked to them for knowledge and direction. Aulia mentioned that "as a Pengajar Muda, we were forced to become a leader whether we liked it or not…we led the teachers, we engaged the people, led the students and the youth in the village."

When asked about who played a role in helping to discover leadership ability, 39.47% of the participants mentioned peers. Kirana illustrated the role her peers played in discovering and encouraging her to take on leadership roles at the university, "My friends actually believed in me, and they actually became my campaign managers. I guess some people had faith in me. Some people pushed me, and I was like, 'Ok I'll just do it.'" During elementary school, peers often were the ones who nominated participants to take on leadership roles in class or school clubs and organizations. 26.32% named teachers as the ones who first helped them realize their leadership abilities. Teachers often appointed students to leadership positions in the classroom (e.g., group projects and assignments) and outside the classroom (e.g., school clubs and organizations, extracurricular activities). Parents (13.16%) and other family members (5.26%) were mentioned less frequently perhaps because school-based activities were typically the main avenue for leadership discovery.

The process of leadership cultivation. Participants were then asked how they developed leadership during their early years (preschool to high school, 0 to 18 years old), later years (college and beyond), and now. Table 13 provides a summary of leadership development experiences in the early years and later years. Full results can be found in Table H9 (Appendix H). For both early years (73.68%) and later years (81.58%), leadership development primarily

took place through in-school experiences, highlighting the important role schools play in early leadership development. Upon graduating from university, participants mainly developed their leadership through their current jobs or other responsibilities.

Table 13

Leadership Cultivation in the Early and Later Years (Summary)

Type of Experience	**Early Years (%)**	**Later Years (%)**	**Representative Quote**
In-school experiences (e.g. Scouts, organizations and clubs, competitions, class leader, group project leader, etc.)	73.68	81.58	From a young age I saw myself being a leader in elementary school. I often led scout groups and games. Then when I was in junior high school, I became the student council president. Then in high school I was often voted to be a leader by my friends. I was not the student council president in high school or anything, I just wanted to be in the field of dance, and it went on to college.
Out-of-school experiences (e.g., family influence, role models, religious organizations, nonprofit organizations)	26.32	18.42	My leadership developed, I think, due to my mother educating me with the values of being independent and making decisions on my own and I can be resilient, and I can be tough to face any conditions, even the worst conditions. This is about my internal family, instead of getting training or education from books or other reference.

Half of the participants mentioned holding leadership positions in the classroom and/or school clubs and organizations during their early years. Annisa described how integral joining various school clubs and activities to her early leader development:

> I think I never attended a formal program or training session for leaders, I think that the (formal training) started more in my college years. I think, in high school, it was more of exercising leadership in an organization. For example, I mentioned earlier about the theatre club during my high school years and also the marching club. During my junior high school years, I also joined several extracurricular activities, like dancing.

Another participant, Jasmine, explains that joining more than one club or organization was formative to her leadership development because she "learned about multi-tasking and how to socialize…I was also brushing my skills, how to present my ideas to people and articulate what I

feel." Participants frequently reported being involved in *OSIS* (student senate) and *Pramuka* (scouts). Nonetheless, not all participants were involved in extracurricular activities during their early school years. Seven participants indicated that they were not active in any organizations or activities outside the classroom. One participant, Alana, said that her parents did not push her to join organized activities:

> Both of my parents were elementary school teachers, and they didn't really push me to have high marks or to go for the extracurricular activities or lessons/extra courses. They believed that during elementary school, what's more important is that I can spend my time having fun with friends.

School-related avenues continued to play an important role in leadership development during the later years (college and beyond). Nearly half of the participants (47.37%) held leadership positions in school-based organizations. Some were involved in the student senate (*HIMA, BEM*), while others were active in arts, academic, or humanitarian clubs/organizations. Twelve participants indicated being active in more than one university club or organization. Only five participants (13.16%) received formal leadership training during their college years. The trainings were mostly provided by organizations outside of the university, for example, the Young Leaders of Indonesia network. Three participants mentioned that personal life events, such as family or financial hardship, helped them to cultivate leadership capabilities. Leon described the impact of personal events in this way:

> My home condition was tough at that time. I learned a lot, in terms of managing and balancing my studies and home condition. Even though my family and my home condition were not really supportive, I always thought that studying and getting an education was important. Because the problems are only temporary. Hopefully, they will

not always continue for a long time. For me to have a good future, I still had to work on the important things in my life. There were times when I experienced hard times, but then eventually I managed to pass it and then I learned a lot from those conditions, and I think those were the things that built me to be who I am right now.

Finally, participants were asked how they develop their leadership now. 34.36% of participants explicitly mentioned learning from their current job. David referred to this as "learning by doing". Another participant, Rahmat, referred to his current job as his "current leadership school" since "each day brings a different challenge and different problems to solve." Others gave more general answers. For example, highlighting the importance of interacting with others, Amanda said:

But what's more important is that we meet a lot of people. Not just the ones we choose to get wisdom from, but to hear from older people, especially the older generation. What made them successful? What are the challenges that our generation face now?

Learning from one's current job and responsibilities include managing daily schedules, prioritizing tasks, and setting goals. Several participants (18.92%) mentioned learning about leadership through sources such as books, magazines, and podcasts. Only three (8.11%) are involved in ongoing formal leadership training.

The process of leadership personalization. Participants were asked about how and when they began to consider themselves as an established leader (Table 14). The majority (63.15%) reported taking less than ten years to become an established leader. On the other hand, 28.95% mentioned that they were not able to answer the question because they viewed leadership as a continuous process, and hence, could not call themselves an established leader. This question may also have been difficult to answer because, unlike the development of sports

or music talent, leadership is often an elusive goal and an after-thought. Participants may have varying interpretations of when actual leadership development began.

Table 14

The Process of Leadership Personalization

Item	Theme	Frequency	%	Representative Quote
How many years (e.g.,5, 10, 15, 20 years) did it take you to feel like you were an established leader?	More than ten years	3	7.89	
	Less than ten years	24	63.16	
	Leadership as a continuous process	11	28.95	I think it's a non-stop journey, and I don't think that in the next 10 or years 20 years, I will be able to say that this is the right formula to be a leader. It's a learning process. I just hope that I can keep growing in terms of leadership.
At what point did you start to develop your own style of leadership?	During IM placement	9	23.68	I think the leaders there really gave a chance for the others to grow. And not to grow to be like them, but they gave us space to grow as our own, with our own uniqueness.
	Current/previous job	9	23.68	Then, I found that leaders are also humans, leaders also need a break, leaders need to be angry, can have bad mood…Instead of always trying to be perfect in front of the team, I can have my own style – I'm loud, sometimes childish. Instead of being fierce or direct, I prefer to be what I am. I also put other team members on the same level as me.
	During university/graduate school	9	23.68	I think based on the mistakes I made when I was in senior high school, my leadership became much better in university because I learned much through trial and error and learning by doing. I improved my capability for leadership. I think my style now was founded when I was in university.
	During high school	2	5.26	I think when I was in high school when I was chosen as the leader of the board magazine at the school. I think that was the time that I started to develop my own personal leadership.
	In progress	8	21.05	It's a lot of trial and errors. It's a lot of "This is what they do, I should do this." Then you find out that doesn't work or that works. I think that's still happening to some extent.

The majority developed their own leadership style in adulthood. Personal leadership style was discovered during IM deployment (23.68%), at current job (23.68%), or during university (23.68%). Participants learned by observing other leaders and eventually figuring out what works for them. Leon, for example, worked under two different supervisors with two

different leadership styles. He eventually realized that one style suited him better and began adapting that style to his own leadership. Being exposed to other leaders also helped them to realize that there is more than just one way to lead effectively. Only two said that they discovered their personal leadership style in high school, and none earlier than that. Interestingly, about a fifth of participants (21.05%) indicated that they are currently still in the midst of developing their own style of leadership, highlighting the ongoing and long-term nature of leadership personalization.

Ability

In the PGM, ability is operationalized using measurable outcomes such as standardized tests, grades, awards, and other domain-specific accomplishments (Paik, 2013). Questions related to the ability factor explored participants' strengths and accomplishments in their early and later years. These include academic and non-academic talents and achievement that have been recognized by teachers, coaches, parents, and other family members. Participants were also asked to describe, in three words, the type of student they were and their personality in their early and later years.

Early ability, awards, and accomplishments. Table 15 presents findings related to early ability, awards/achievements participants were most proud of, and why. More than half of the sample (52.63%) indicated that they had high academic ability beginning in elementary school. High academic ability also included having above average memory. For instance, Robby described having above average mathematical skills:

> I recall that in first grade, I already knew how to multiply one to five. Actually, I was admitted to primary school before the required age. At five, I was already admitted into the first grade, without ever going to kindergarten.

Five participants (13.16%) also cited strong motivation as an early ability. Yanuar, who came from a small village, mentioned that he taught himself English, even though no one else in his village was familiar with the language. Another five participants (13.16%) cited having good interpersonal skills, which includes being compassionate, sociable, and charismatic. Less pervasive abilities mentioned include having high energy and being organized. Only two participants mentioned having artistic talents – possibly indicative of the cultural emphasis placed on academic subjects rather than non-academic subjects such as sports and arts.

Table 15

Early Ability and Accomplishments

Item	**Theme**	**Frequency**	**%**	**Representative Quote**
What strengths or exceptional abilities did you have as a child?	Academic ability	20	52.63	During my elementary school, I was always the best in class. I understood things quickly.
	Strong internal drive	5	13.16	I had a strong motivation to go beyond the limits. At an early age, I already learned English by myself...even though the other students and people from my village were not really familiar with English.
	Interpersonal skills	5	13.16	I'm good at personal relationships. I loved to make people happy around me.
	Organizational skills	4	10.52	I was quite disciplined with my schedule. I was quite organized since I was in elementary school.
	High energy level	3	7.89	I was a very active and cheerful kid.
	Artistic ability	2	5.26	My teachers always said that I was very talented in art like music or drawing and dancing, traditional dance.
From all your major awards and accomplishments, of which ones are you most proud?	Becoming a Pengajar Muda	16	42.11	E.g., completing the one-year deployment and being selected from the many applicants.
	School-related awards and accomplishments	14	36.84	E.g., scholarships for overseas studies, attending student exchange programs, academic awards, and completing studies despite financial or personal difficulties
	Competitions	6	15.79	E.g., won competitions nationally or internationally
	Work-related awards and accomplishments	3	7.89	E.g., hired by employer, promotion at current job
	Initiated a project or organization	3	7.89	E.g., dance organization and a community-service project
	Others	1	2.63	E.g., invited to give a speech at an international event

And why?	Valuable learning experience	15	39.47	Those experiences became an asset to me now in my professional life. In many challenging situations, I remembered that I have handled something more challenging previously, so I have the confidence to handle the current situation.
	Impact to others	11	28.95	Knowing that many people developed their skill because of the place I built felt like the most rewarding moment to me. I think my accomplishment was making people grow.
	Proof of resilience	9	23.68	That was really a sign that I didn't give up during the adversities.
	Validation of work	7	18.42	It meant a lot because one, that meant I'm not that bad of a mentor. That means I did something right. I think I'm really proud of that because I know that wedding is something that's really important for anyone who's getting married. He said that he was very thankful for me coming. I was really thankful that he gave me this opportunity, it meant a lot.

When asked about awards – academic or non-academic – that they are most proud of, 16 (42.11) mentioned being chosen and deployed as a Pengajar Muda. Fourteen (36.84%) mentioned school-related awards, which includes scholarships for overseas studies, attending student exchange programs, academic awards, and completing studies despite financial or personal difficulties. Six (15.79%) mentioned winning competitions - some at the national and others at the international level - as their most significant accomplishment to date. Reasons for the significance of those awards and accomplishments include providing a valuable learning experience (39.47%), the impact made on others (28.95%), and proof of their resilience in the face of difficulties and challenges (23.68%). In addition, awards also served as external recognition of their efforts and abilities. For instance, David explained that being selected as a Pengajar Muda was his most "prestigious achievement" because he was "selected from 4,000-something applicants".

Type of student in the early and later years. Participants were asked to name three words that described the type of student they were during their early (preschool to 12th grade) and later years (college and beyond). For comparison purposes, words were grouped with other words that had similar meaning. For instance, words that related to effort and hard work were grouped under *diligent*. Table 16 presents a side-by-side comparison of how participants described themselves in their early and later years. The most common word groups were identical for the early and later years, albeit in differing order. During the early years, participants described themselves as being *diligent* (42.11%), *a passionate learner* (34.21%), and *active* (28.95%). In contrast, in the later years, they described themselves as being *active* (47.36%), *a passionate learner* (34.21%), and *diligent* (26.32%). It is interesting to note that the most common word groups were effort-oriented words rather than ability-oriented words. Only eight participants described themselves as being an *intelligent* student in their early years, and only three participants described themselves as being an *intelligent* student in their later years. Another interesting finding was that participants described themselves as being more *competitive* during their early years (15.79%) than their later years (5.26%). On the other hand, they were more *collaborative* during their later years (23.68%) than during their early years (7.89%).

Table 16

Words Describing Type of Student in Early Years and Later Years

Word Group	**Early Years (%)**	**Later Years (%)**	**Examples of Words Used**
Diligent	42.11	26.32	Attentive, serious, obedient, hard-working, on-task, prepared, motivated, disciplined
Passionate learner	34.21	34.21	Inquisitive, curious, enjoyed learning, open-minded, explorative
Active	28.95	47.36	Participates actively in class, contributes to discussions, talkative, outspoken, active in many organizations, leadership, resourceful, multi-tasker
Intelligent	21.05	7.89	Quick-learner, gifted, smart, bright
Competitive	15.79	5.26	High-achieving
Introverted	13.16	10.53	Quiet, not active, observer
Resilient	10.53	13.16	Tough, persevering, brave, persistent
Lazy	10.53	0	Forgetful, disorganized

Playful	10.53	18.42	Easygoing, fun, creative, easygoing, relaxed, unstructured, non-academically oriented
Collaborative	7.89	23.68	Helpful, friendly, nice, generous, competitive, sociable, respectful

Motivation

Motivation in the PGM includes internal and external drivers of behavior and achievement (Paik, 2015). Questions were aimed at understanding the root causes or beliefs that underlie participants' achievement orientation. In other words, the questions were aimed at understanding why participants do what they do or think what they think. In addition to internal and external reward systems, the questions also examined participants' attitudes about effort and ability, attributions of success, and habits/strategies used to succeed at school and work.

Motivation during school years and now. Table 17 summarizes participants' reported motivation based on whether it was *other-centric* or *self-centric*. Other-centric behaviors are driven by the desire to benefit others, while self-centric behaviors are primarily driven to benefit self. Other-centric motivation is higher now than during participants' school years. In contrast, self-centric motivation is lower now compared to during participants' school years.

Table 17

Motivation During School Years and Now

Item	Type of Motivation	School Years (%)	Now (%)	Representative Quote
What motivated you to excel throughout your school years (preschool through university and beyond)? What motivates you to excel in your profession now?	*Other-centric (for the benefit of others)*	47.37	76.32	
	Sense of gratitude to parents	34.21	15.79	I think the reason why I excelled in the school years, and until now, is I want to be the best daughter for my mother. I want to make her proud of me.
	Desire to make an impact	7.89	57.89	I want to do something good. I want to have some impact. That plays a big role when I'm deciding what I'm going to do next in my career, like what kind of impact that this can give, what is the purpose in that.
	Religious reasons	2.63	2.63	Every second is my worship. I feel like I worship by remembering that my time is limited, and how to make every second

				count with my every effort in doing something.
	Self-centric (for the benefit of self)	47.37	34.21	
	Attainment of success	21.05	23.68	I think it's something innate. I like to earn good grades basically. It's a typical Asian. I like to see getting 90s on my report cards... I don't think our parents gave us incentives or gave us anything whenever we achieve anything. I just wanted to excel.
	Competition and comparison with peers or siblings	13.16	2.63	What motivates me when I was in school was my brother. I always compared myself to my brother even though my parents never compared us.
	Proving others' wrong	10.53	5.26	When I attended the university, my main motivation was to prove to my mother's family, who didn't support my mother's decision to send me to university.
	Enjoyed learning	5.26	2.63	I think I was able to do well not because I forced myself to do well but because I liked reading, it's just a habit that's being instilled in me.
	Extrinsic rewards (e.g. presents)	2.63	0	I think elementary to junior high school, it's good grades because the incentive was I to get presents.
	No specific reasons	13.16	0	I don't think I had any specific motivations during my school year especially in elementary school to high school. I felt like I didn't really exert much of an effort… I just happened to be good at it.

As shown in Table 17, the top three sources of motivation during the school years were a sense of gratitude to parents (34.21%), the attainment of success (21.05%), and competition or comparison with peers or siblings (13.16%). Currently, participants indicated that they are primarily motivated by a desire to make an impact (57.89%), the attainment of success (23.68%), and sense of gratitude to parents (15.79%). Indeed, the sense of indebtedness to parents' sacrifice seem to be a pervasive theme that began in childhood and continued into adulthood. Audrey explained her desire to make her parents proud in the following way:

> Because (my parents) gave me all that they had. I wanted to give back what they had given to me. If I can make them proud, they will be so happy. They will be so proud of

> me. My parents would feel that whatever they have given me has been enough to make me who I am today.

As children, many of the participants witnessed their parents' hard work and sacrifice in order to afford their children opportunities they themselves never had. Parents' sacrificial love became a strong driving force in participants' lives even until adulthood.

Another source of motivation was a strong desire to succeed. For some, this desire came from external sources such as parents or other family members. Sarah, for instance, mentioned how her father imparted the value of academic achievement in her:

> Growing up, my father was always the one that established that the most important quality of someone is to be smart. I think that's what motivates me and my siblings to always excel in academics because he always valued academic achievement over everything else.

Several others were driven by the goals of entering top-ranked schools and universities or getting promoted at work. For some, a strong internal drive propelled them to achieve in all areas of life. Brenda said, "I did not want to be ordinary. I loved to be identified as a high achieving student. There was always something inside me that said, 'I have to do better than this.'"

Peers and siblings served as another source of motivation during childhood (13.16%). Participants often compared themselves to older siblings and high-achieving peers. Robby said, "From elementary to junior high school, I looked up to my older sister. She was brilliant in school. She set the standards. I really wanted to be her bright little brother." Several also noted that their parents would often compare their achievement with that of other children in the neighborhood. A related theme is the desire to achieve in order to prove others' wrong. Yanuar

mentioned that growing up, his peers and teachers often underestimated his abilities, and this became a driving force in his desire to make something of himself.

Perhaps most interestingly, the desire to make an impact increased significantly from the school years (7.89%) to now (57.89%). This is also reflected in the shift from a self-centric to others-centric motivation shown in Table 17. More than half of the participants indicated that they are motivated by the desire to impact their surroundings and nation. Anna shared the advice given to her by one of her mentors: "If you want to look for your fire, find what you love or find what makes you angry." She said that this advice made her realize that what makes her very angry was intolerance. This fire was what motivated her to start several organizations related to bridging the ethnic and religious divide in Indonesia.

Attribution of success. Participants were asked to identify the main contributors to their success. As shown in Table 18, responses were then categorized based on whether they were internal or external causes. Half the responses were related to having a good work ethic. Participants mentioned being disciplined, resilience, and having the humility and willingness to learn. Having a positive attitude was also considered to be an important reason for success. This includes being grateful in all conditions, being optimistic even in the midst of difficulties, and having confidence in ones' own skills and abilities.

Table 18

Success Attribution

Item	**Type of Cause**	**Theme**	**Frequency**	**%**	**Examples**
Based on your experience, what would you most attribute to your success?	*Internal causes*	Good work ethic	19	50	Discipline, persistence, resilience, hardworking, willingness to learn
		Positive attitude	10	26.32	Gratefulness in all conditions, embracing failures, self-confidence
		Altruism	2	5.26	Want to make a difference in other people's lives
		Intelligence	1	2.63	Intelligence
	External causes	Supportive people	7	18.42	Family, friends, teachers

		Devotion to God	5	13.16	Prayer and trust in God
		Opportunities from others	4	10.53	Opportunities to lead or attend training
		IM deployment	4	10.53	Learning from other PM, learning from daily experiences
		Good education	2	5.26	Attended top-ranked schools

Participants were also asked whether they thought effort or ability was more important. The majority (78.95%) answered that exerting effort was more important than having ability. In general, participants alluded that ability is something that can be attained through effort, and that having ability without effort will not lead to achievement. Maria, for example, said, “It would be useless if you had the ability but you’re not shaping it through effort. Those with ability can be defeated by those with more effort.” These participants believed that their achievements to-date are primarily due to their efforts rather than innate skills or abilities.

Table 19

Perceptions of Effort and Ability

Item	**Theme**	**Frequency**	**%**	**Representative Quotes**
Do you think effort or ability is more important? Why?	Effort	30	78.95	Because hard work always wins, because I feel like even right now, I'm not the best person in the office, I'm not the best student in Indonesia. But because I work hard, I am still doing well.
	Both	7	18.42	Ideally, a person should recognize what his/her talents and abilities are and apply effort in those areas…then we could put our effort and not start from zero. Without initial ability, it would be very hard and requires a lot more effort.
	Ability	1	2.63	Cannot endure without ability, ability can lead to other opportunities.

Nonetheless, 18.42% of participants responded that both effort and ability were necessary to attaining success. Anna stated:

> I think it's both, because I think you need to equip yourself with the right skills and the right ability for you to be able to put in effort. I've met people who are really hard workers. But if you just don't have the ability, you won't be able to get far. If you don't

have the right mindset, mindset can be translated into your ability to do things, then you will be stuck as well…Ability is something that can be acquired as well along the way.

Anna, along with other participants who indicated that both effort and ability were important, believed that they go hand-in-hand. One cannot work without the other. Only one participant answered that ability was more important because it would open up doors to other opportunities.

Personality in the early and later years. During the interview, participants were also asked to choose three words that described that personality as a child and personality now. The words participants named were grouped with other words with similar meaning. For example, words such as *positive*, *cheerful*, *happy*, and *confident* were categorized under the word group, *optimistic*. The top three personality during childhood and now were similar. During childhood, the top three were *introverted* (28.95%), *loved learning* (21.05%), and *empathic* (15.79%). The top three personality now were *loved learning* (31.58%), *relaxed* (26.31%), *introverted* (21.05%) and *empathic* (21.05%). This finding highlights the enduring nature of certain traits and characteristics such as introversion and curiosity. Interestingly, more participants described themselves using words that related to introversion rather than extroversion. This may reflect cultural differences between leadership expectations in Eastern and Western societies.

Table 20

Words Describing Personality in Early Years and Later Years

Word Group	Early Years (%)	Later Years (%)	Examples of Words Used
Introverted	28.95	21.05	Quiet, shy
Curios	26.32	31.58	Loved learning, hungry, open-minded, explorative
Empathic	15.79	21.05	Kind, helpful, servant-hearted
Optimistic	13.16	13.16	Positive, cheerful, happy, confident
Extroverted	13.16	5.26	Talkative, energetic, hyperactive, outgoing
Resilient	13.16	13.16	Tough, persevering, persistent
Playful	13.16	0	Mischievous, naughty
Rebellious	10.52	0	Always broke the rules, difficult to manage
Creative	7.89	15.79	Creative, imaginative, innovative
Diligent	7.89	15.79	Hard working, motivated, serious, disciplined, self-driven

Brave	5.26	15.79	Fearless, brave, adventurous
Selfish	2.63	0	Selfish
Emotional	2.63	2.63	Emotional
Competitive	2.63	0	Competitive
Relaxed	0	26.31	Easygoing, less serious, reflective
Relational	0	10.53	Enjoy meeting people, friendly
Logical	0	2.63	Logical

Habits and practices. Participants were asked to describe any helpful habits and practices that they had during their school years (preschool to university and beyond) and in their profession now. Interestingly, the top three practices during the school years and now are similar. Firstly, learning and validating information (44.74% during the school years; 47.37% now), time management (23.68% during the school years; 39.47% now), and practicing self-care (21.05% during the school years; and 28.95% now).

Table 21

Habits and Practices During School Years and Now

Theme	School Years (%)	Now (%)	Representative Quote
Learning and validating information	44.74	47.37	Nowadays, with social media, surfing on Instagram or Twitter to find other interesting perspectives or other information from another point of view.
Time management	23.68	39.47	No matter how late I go to bed I always wake up at five, and I think if you start activities early it gives you the sense that you will be very productive.
Practicing self-care	21.05	28.95	I like walking by myself without knowing where to go. I just walk in the morning and then, I will talk to myself. When I'm walking, I think it becomes more like therapy as well when I am so stressed. I feel happy after that.
Meeting people (incl. having discussions and asking questions)	5.26	23.69	I'm learning on how to build relationship, being much more open on having like, for example, just lunch together with people or dinner, and then being more proactive on reaching out to others, catch up and building relationship which I wasn't very good at before.
Positive attitude	0	5.26	Sometimes, I know that this annoys some people, I always have the tendency to see things in a positive way so that whenever challenges appear or hardship appear there's always a solution. We can always do something about it, like that.
None	21.05	5.26	Nothing in particular, really.

Nearly half of participants indicated that the willingness to learn and also validate information was an important skill to have. Anna, for example, explains the habit of validating information as "searching for answers and not being satisfied with *A* truth because there could be multiple truths." During the school years, this was primarily done through reading books since other forms of media were not yet available. Yanuar described reading books as giving him "so many things…reading can open the world, it can open the windows to the world." The availability of the internet made information accessible through various outlets, including social media, podcasts, online videos, blogs, etc. Participants indicated that they frequently use these types of media to gain new information and perspectives.

Time management includes waking up and sleeping early, preparing materials needed for the next day, and also exercising discipline. A few participants mentioned creating a to-do list and prioritizing the most urgent tasks first. Michelle, who at one point was diagnosed with a serious medical condition, said:

> Prioritizing my schedule is very important. In a day, I usually already have a list of what I want to do. Not many, but maybe just some - two or three activities that I want to achieve in a day. I just set a few things a day as my goal so that I don't get disappointed with myself.

Similarly, Yanuar highlights the importance of setting daily goals, "I'm always a planner. The downside is I'm not that flexible, but I always start a goal and set a way to achieve that goal." Others had regular study times and woke up early.

Forms of self-care includes physical exercise, relaxation, reflection, and prayer. These can be achieved through many ways. For instance, some participants reflect by practicing mindfulness, while others through writing or walking outside. Practicing self-care allows

participants to express their emotions – whether positive or negative – instead of internalizing them. For example, Yanuar found prayer to be helpful in clearing his mind and finding solutions to problems. Rika and Dewi both used writing to cool down and process their emotions.

Instructional Factors

The PGM defines instruction as learning both in-school and out-of-school. Instruction can be directly or indirectly related to the talent area. In the case of leader development, instruction can include formal education (preschool to graduate school), formal leadership training, and on-the-job learning experiences. Findings related to *learning climates* will be presented first, followed by findings for *quality of instruction* and *quantity of instruction*.

Learning Climates

Learning climates include the social, affective, psychological, and academic aspects of an environment that may influence learning (Paik, 2013; 2015). Since leadership development mainly took place in schools, this section discusses the findings on school learning climates, from elementary through graduate school.

Features of supportive learning environments. Participants were asked to identify the ways their schools (elementary and secondary) and universities (undergraduate and graduate) provided a supportive learning environment. Nearly all the responses referred to the physical aspects of the learning environments, for example, facilities and resources. Only one participant mentioned attending a school that encouraged creativity and innovation. A large variety of extracurricular activities and organizations was the most cited feature for both elementary/secondary (60.53%) and undergraduate/graduate school (50.0%). Membership in school/university clubs and organizations often brought access to competitions and other national

or international learning opportunities. Michael described how participating in competitions helped to increase his confidence and self-esteem:

> There were a number of times when my teachers chose me to represent the school in competitions. My earliest memory is going to a math competition in fifth grade or fourth grade. I think the fact that they gave me the opportunity and not somebody else means something. Now, I have come to appreciate it and I think it helped me build my self-esteem especially when it relates to academic confidence.

Participation in extracurricular activities also provided opportunities to learn leadership-related skills such as discipline, time management, communication, and collaboration.

Table 22

Features of Supportive Learning Environments

Item	**Theme**	**Elementary & Secondary (%)**	**Undergraduate & Graduate (%)**	**Representative Quote**
In what ways did the schools provide a supportive learning environment?	Large variety of extracurricular activities and organizations	60.53	50.0	Then the extracurricular activities, I think that helped to shape my leadership ability. I think because I was really busy with extracurricular activities, I had to wisely manage my time. I had to find time to do everything, literally. To finish my assignments and to finish my extracurricular activities as well.
	High quality teachers and lecturers	47.37	26.32	The teachers were really supportive…They always thought that one day I'd be somebody. They said that I had so much to offer and that I can be useful to a lot of people, and that kind of support assured me to take these paths.
	Well-equipped learning facilities	21.05	18.42	I think the schools I attended had a lot of facilities, like a computer laboratory, also a large hall, there is also a stage for the students to perform, dancing, playing music, theater, something like that.
	Positive peer influence	15.79	23.66	In my high school, everyone was really competitive, so it's not okay for you to be lazy. It's a *fomo* – fear of missing out. You also want to

				learn something because everybody is learning.
	Encouragement of creativity	2.63	0	The environment encouraged students to innovate.

High quality teachers and lecturers were the second most-cited feature for both elementary/secondary (47.37%) and undergraduate/graduate (26.32%). Michelle, for example, described how her teachers effectively taught their classes:

> In general, because these were the top schools, I got exposed to top quality teachers. They really made a difference in my life. They were really passionate in what they did. It was not a conventional one-way communication in the classroom, but more two-way communications. They really facilitated the students to develop their capacities.

Additionally, teachers were described as being professional, experts in the field, and having in-depth knowledge about their subjects. They used engaging teaching methods that differed from the traditional emphasis on rote memorization. Several participants also mentioned how their teachers provided support in and out of the classroom.

Other supportive features include having well-equipped facilities (i.e., library, computer lab, science lab) and positive peer influence. Sarah described how her peers influenced her to excel, "Having competitive peers makes you set your standards higher and realize that you cannot be lazy… you have to work fast otherwise others would have already finished the race." In addition to providing challenge and accountability, peer influence can also come through informal and formal mentorship. In one university, seniors and juniors from the same geographic region were formally paired so the juniors can transition smoothly into university life.

Level of school expectations. Participants were asked whether or not their schools set high expectations. More than half of participants indicated that their elementary/secondary

schools (52.63%) and undergraduate/graduate schools (52.63%) did set high expectations for all students. These include expectations that students score high marks on national examinations, enter top-ranked schools and universities, and win competitions they participate in. Sarah explained how her school expected students to gain acceptance in one of Indonesia's top-ranked universities:

> From primary school, it was being indoctrinated that ITB is the best school, the best university in Indonesia, so we have to attend it. From a very early age it was being indoctrinated. That's why we had to score good grades during the national exams, because we have to attend the best junior high school, and then the best senior high school in order to get into ITB. That's the main theme of everyone in Bandung, they will relate to this kind of experience, it is all about (getting into) ITB.

Once in university, students were expected to submit high-quality undergraduate thesis. Upon graduation, they were then expected to enter top-ranked graduate programs or work for reputable companies.

Table 23

Level of School Expectations

Item	**Theme**	**Elementary & Secondary (%)**	**Undergraduate & Graduate (%)**	**Representative Quote**
Did your schools set high expectations?	High expectations for all students	52.63	52.63	For all the students, yes. The minimum grades to be passed-- the passing grades were quite high. During the final national exams, they also set the standard like, "We need to get the first rank in the province". So actually, they had high expectations for all their students.
	High expectations for individual students	7.89	13.16	The school set high expectations for me because I was one of their top students (*siswa unggulan*). So, when I joined competitions, they expected me to win. Whenever there were competitions, they would ask me to join. There was that expectation on me.

	Absence of high expectations	26.32	34.21	

Several participants indicated that their schools did not set high expectations for everyone, but only for individual students. Aulia, for example, mentioned that as one of the school's top students, she was expected to join competitions and win. Similarly, Rahmat, said that one of his teachers expected him to bring the university debate team into the national debating championship. Some participants indicated that their elementary/secondary schools (26.32%) did not set high expectations, while others indicated that their undergraduate/graduate schools (34.21%) did not set high expectations.

Quality and Quantity of Instruction

Quality of Instruction refers to the characteristics of the instructors and instruction received (Paik, 2013). *Quantity of Instruction* refers to the amount of instruction an individual receives in a particular talent area. Instruction for musical talents or sports talents can be quantified much more easily than leadership talent, since the latter is not typically pursued intentionally. Hence, with regard to leadership, *instruction* includes any experience that aid in the development of leadership-related skills.

Quality of formal education. Table 24 summarizes participants' formal education quality from preschool through graduate school. The majority reported having received high quality elementary/secondary education (76.32%) and university/graduate education (92.11%). Most participants operationalized a high-quality education in terms of being a high-ranking elementary/secondary school (63.16%) or university/graduate school (39.47%). High quality education was also associated with high quality teachers in elementary/secondary school

(21.05%) and university/graduate school (31.58%). Participants described these teachers as experts in their fields. They were also passionate about the subjects they taught and used engaging or creative teaching methods. Brenda, for example, mentioned that in university she "had access to experts in the field…like one professor who inspired me to be in the same field, she was very passionate about research in psychology and I found it to be very interesting."

Table 24

Formal Education Quality (Full Results)

Item	**Theme**	**Frequency**	**%**	**Representative Quote**
Looking back at your preschool to high school education, do you feel that you received a good education from preschool to high school? Why?	*Yes*	29	76.32	
	Highly-ranked Schools	24	63.16	The top ranked schools have good teachers, have good monitoring of the students' results. I think we can say that. That's why I think it's common that the parents want their children to enter a good school, top ranked schools because in the end, the children will be expose to good teachers and good environment, also good peers, something like that. Because of that, because I entered top ranked schools, I was also exposed to and experienced a good environment at school.
	High quality teachers	8	21.05	The teachers were different from typical teachers here in Indonesia. They were more Westernized…They would encourage us, empower us.
	Various learning opportunities	5	13.16	I think especially during my junior high school and my high school, I attended a popular school, so I was exposed to a lot of activities. Not only academic activities, but also competitions…It helped to broaden my experience and my view.
	Good facilities and resources	2	5.26	In elementary school, I had access to a very good library and a computer laboratory. I know for some people in my neighborhood computers were a very rare thing, but I already got access since elementary school.
	No	9	23.68	
	Not highly ranked	3	7.89	My elementary school, it's a private school. It's a Muhammadiyah school. It was known as the school where kids in the area would go to if they cannot get into the public schools.
	Not engaging	2	5.26	The most boring time for me was during Junior High School as I went to a government school.
	Outdated teaching methods	2	5.26	High School was very standard. Just memorizing things, there's no subject that I felt made a big impression on me.

	Limited facilities and infrastructure	2	5.26	My elementary school was very isolated and had minimal infrastructure and facilities…There were no libraries in my schools, including in junior high school and senior high school. I think it's because good schools are located in the big cities.
	Limited learning opportunities	2	5.26	I never got exposed to things outside of the academic subjects.
Looking back at your university and graduate education (if you attended), do you feel that you received a good post-secondary education? Why?	*Attended high quality post-secondary schools*	35	92.11	
	Highly-ranked	15	39.47	Back in my college time, UNAIR was one of those top five universities in Indonesia at that time. I had many quality lecturers. Many of them are quite well known internationally – they have published in international journals and publications.
	Quality lecturers	12	31.58	I had access to the experts in the field. I found a lot of my mentors there. Like one professor who inspired me to be in the same field – she was a researcher. She's very passionate about research in psychology and I found it to be very interesting.
	Good facilities (i.e., library, computer lab, science lab)	5	13.16	They had better facilities for students. For instance, a sports arena, a well-stocked library, study rooms. So in college I really experienced a good education in terms of facilities.
	Diverse student body	3	7.89	I received a good university education even though it was not one of the top-ranking universities in Indonesia. I met so many new people that gave me a new perspective. That made me grow so much. From drunks, to drug abusers, to diplomats…And I have friends from various levels. So, I really grew while I was in University.
	International learning opportunities (e.g. student exchange programs)	3	7.89	I had access to international activities and international programs such as study exchanges or international conferences.
	Positive peer influences	2	5.26	I think having the privilege of being at one of the best institutions, exposed me to peers who were potential leaders, which is kind of proven now since my peers from university hold many strategic positions, different positions, which also gives me the network that is very valuable.
	Did not attend high quality post-secondary schools	3	7.89	
	Irrelevant course content	2	5.26	Frankly speaking, what I really use from my university knowledge is probably like 10% to 15% only, because what I'm doing is basically

				off from what I learned in university. I was studying business, international business specifically, but right now I'm doing this.
	Outdated teaching methods	2	5.26	I feel like (the university) has more old people teaching with the old methods and it was not really interesting getting my education. I just said wanted to graduate as soon as possible, I didn't want to go back.

Other reasons mentioned for high-quality elementary/secondary education include a wide variety of extracurricular clubs/activities offered, adequate facilities (e.g., science lab, computer lab, libraries), and various learning opportunities (e.g., studying abroad, competitions). Zulfikar mentioned that his top-ranking school "gave a lot of opportunities to develop my skill, to develop my ability, and to develop my leadership." Similarly, additional reasons mentioned for high-quality university/graduate education include access to good facilities, diverse student body, and international learning opportunities (e.g., student exchange programs, conferences, competitions). Several participants also noted that experiencing positive peer influence was one of the benefits of attending a top-ranked school or university. Leon described it in this way:

> I think because it's one of the best schools in the country, what I experienced was that my friends also had the ambition to attain good grades. They liked to arrange group discussions, group learning, studying together…That's why I think the environment also encouraged students to study together, to have good grades, to understand things that we were being taught.

Approximately 23.68% of the participants mentioned that they experienced a low-quality elementary/secondary education and 7.89% said they experienced a low-quality university/graduate school education. Low quality education was typically explained in terms of schools not being top-ranked, the use of outdated and unengaging teaching methods, and the lack of facilities and proper infrastructure. For example, Yanuar, whose elementary and secondary

school was located in a remote village, said that the schools he attended did not have libraries. In university, low-quality education was typically due to irrelevant course content. Bayu, for example, mentioned that his university "focused a lot on theories and didn't (provide students opportunities for) a real working experience like through internships".

Overall school enjoyment. Table 25 reports participants' overall school enjoyment. The majority (84.21%) indicated that they enjoyed school. Only three participants said that they did not enjoy school, and another three said they enjoyed only certain aspects of school (yes and no). Interestingly, most (65.79%) said that they enjoyed school because of the opportunities to socialize with peers, teachers, and mentors. For instance, Annisa said,

> I think what I liked most about school was that I got to be with my friends and did a lot of fun stuff. For example, the extracurricular activities or the activities outside the regular academic activities has always been a part that I loved about school.

Similarly, Henry mentioned that at school he could "meet a lot of people and gain a lot of perspective and learn from them." For Alya, whose parents were constantly fighting, school provided an escape from the troubles at home.

Table 25

Overall School Enjoyment and Reasons

Items	Theme	Frequency	%	Representative Quote
Looking back at your overall school experience, did you enjoy school? Why or why not?	*Yes*	32	84.21	
	Opportunities to socialize	25	65.79	I think I'm a very social person, so I loved the school organizations and school activities.
	Opportunities to learn	21	55.26	I liked school. I liked studying. This is a funny thing to say, but I like studying. I love doing homework. I love reading.
	Enjoyed teachers and classes	4	10.53	The teachers always gave us support, very helpful, and always prayed for the best for their students.
	No	3	7.89	
	Yes and No	3	7.89	
	Did not enjoy the learning process	6	15.79	I don't feel like I enjoyed learning process in my high school.

	Too much pressure to perform	4	10.53	But when I was in high school, I don't know why, I didn't really like school. Maybe because of the pressure that school give to us to become the best school in the area or we had to reach certain scores and benchmarks.
	Negative social experiences (e.g., bullied)	3	7.89	To be really honest, I didn't really enjoy time when I was at school because people bullied me too much. I don't really see those days as the best days of my life.

More than half (55.26%) mentioned that they enjoyed school because of the opportunities to learn. Michael said, "I enjoyed learning stuff and I also enjoyed tinkering with math problems, like physics problems. It's like constantly uncovering new things, I think that's what interested me the most about school." For some, school was also a place where they could learn important non-academic skills. Amelia said,

> School not only gave me the basic knowledge to read, to calculate, or to speak - the education. School also gave me the opportunity to master my soft skills. For instance, meeting deadlines, having responsibility, completing homework. So yes, I enjoyed school.

Participants' own willingness to learn made school an enjoyable place to be. Interestingly, however, only four participants mentioned that they enjoyed school because of the teachers and classes.

Nearly all the participants who answered "no" or "yes and no" said that they did not enjoy their school experience because they did not enjoy the learning process. While some mentioned inexperienced teachers or unengaging teaching methods, four participants pointed to the intense academic pressure set by their schools:

> I felt the requirements were too high for us. Especially for math subject in high school, it was crazy. It didn't make any sense and although I would rarely cheat, I had no other option but to cheat as I couldn't do it. I had to cheat.

Three participants experienced bullying by their peers and had negative social interactions that made school unenjoyable.

Characteristics of most influential teacher. Participants' most influential teacher came from every level of schooling. The majority (73.68%) said that the teachers were most influential because of the encouragement and support they gave to students inside and outside the classroom. Amanda described her elementary school teacher this way:

> He was the one telling me to join many competitions. Getting me to join them, and he would come and really pay attention while I was doing a speech or poetry competition….He would be at the front watching me and whenever he was there, I would win the competition.

These teachers were typically the ones who encouraged participants to develop their talents, acknowledged their strengths and abilities, and even recognized their early leadership ability. They also provided technical support, such as writing numerous recommendation letters for scholarships and other learning opportunities. Participants also mentioned that these teachers cared for them beyond just academics. Two participants referred to these teachers as "second parents" who would provide feedback and correction on both academic and non-academic matters.

Table 26

Most Influential Teacher Characteristics

Item	Theme	Frequency	%	Representative Quote
Of all the teachers you've had,	Elementary school teacher	15	39.47	
	High school teacher	15	39.47	

which teacher influenced you the most?	University lecturer or advisor	14	36.84	
	IM trainer	1	2.63	
	School counselor	1	2.63	
	Father	1	2.63	
	None	1	2.63	
Why?	Provided encouragement and support	28	73.68	This teacher was always encouraging us to dream, to be what we want, to dream big and do something about it.
	Used engaging teaching methods	15	39.47	She was easy to talk to, and people love to talk to her, and she was influential, her class was fun, there wasn't much pressure in her class, no homework. It was just fun.
	Had high expectations for students (including providing challenge)	6	15.78	The biggest thing is she always challenged me. She's actually my undergraduate thesis supervisor. Since the beginning, she always told me, "I know you can do this so I'm going to be hard on you."
	Imparted good values and advice	5	13.16	He told us that when we wanted to work in some area, we must ensure that our work have these social values, it will be impactful to others. He wants us to be useful to the society. All his teachings were related to social and humanitarian values.
	Practiced humility	2	5.26	She's okay saying that she needs to gather more information.

39.47% mentioned that their most influential teacher(s) used engaging teaching methods. Robby described his English teacher in this way:

> She taught us about English through song lyrics, through movies, through practicing the conversation in front of the class, through singing. It was very cheerful and very fun. The class was very memorable. She made everything easy and accessible.

These teachers were also described as being passionate in their subject area. For example, Kirana said that her influential teachers really enjoyed teaching and wanted their students to succeed. Additionally, 15.78% mentioned that their most influential teachers challenged them and had high expectations for them.

Characteristics of most influential course. As with the most influential teacher, participants' most influential course occurred in every level of schooling. Fifteen mentioned a

course in university or graduate school as being the most influential. Influential courses outside formal schooling include after-school classes and the intensive training provided by IM prior to deployment. The most cited reason for the course being influential was that it provided relevant knowledge and skills, especially with regard to leadership (34.21%). For example, Anna attended an improvisation class and described what she learned:

> The skills that you need to be a good improviser are the skills that you need to be a good leader. You need to be comfortable with uncertainty, you need to listen to your teammates, you need to trust them, you need to be trustworthy, you need to be able to speak clearly, concisely, you need to be able to accept whatever that's being thrown at you and you have to do something with it.

Table 27

Most Influential Course Characteristics

Item	Theme	Frequency	%	Representative Quote
Of all the courses you've had, which course influenced you the most?	University/graduate course	15	39.47	
	High school course	7	18.42	
	Elementary school course	4	10.52	
	Extracurricular course (academic/non-academic courses outside of school hours)	4	10.52	
	IM training	3	7.89	
	None	5	13.15	
Why?	Provided relevant knowledge and skills	13	34.21	For example, we were taught negotiating skills there. We were taught how to build positive working atmosphere, how to self-assess. These were also the foundations that made my performance in my professional life better.
	Engaging course structure and content	9	23.68	But in her class, for the examination, what we did was we had to discuss the topics and the findings and what we found in terms of psychology in the field, based on journals and research publications. As a student, you were expected to contribute ideas, to listen to what other people saying, and then respond with scientific evidence. That was very, very inspiring.

	Experienced personal transformation (i.e., in perspective, mindset, behavior)	9	23.68	The course shapes the way I am now. It changed me a lot.
	Allowed access to other opportunities	2	5.26	It's an entrepreneurship course and it influenced me to apply for the entrepreneurial programs from DIKTI. I was awarded 40 million rupiah to start a business. I did it just because of the course.
	Excelled in subject	1	2.63	The mathematics teachers taught in an enjoyable way. I just really enjoyed mathematics. I was also good at it and joined many mathematics competitions.

In addition to relevant content, influential courses were taught using engaging methods that made learning enjoyable and interesting (23.68%). Others mention that influential courses were the ones that led to transformation in perspective, opinion, or mindsets. For example, Rika described how a class activity helped her realize that all people - regardless of their ethnicity, religion, or socioeconomic status - were essentially the same. The exercise encouraged her to forge positive relationships with those from different backgrounds.

Leadership development in-school and out-of-school. Table 28 reports additional in-school and out-of-school experiences that supported participants' leader development. For the most part, schools developed leadership indirectly. Nearly half (42.11%) said that leadership skills were acquired by being part of school-based clubs and organizations, leading group projects and assignments, working as teacher or lab assistants, and participating in competitions. Musa, for example, said that he learned the importance of discipline and time management by virtue of being in university and having a lot of free time:

> I think my leadership skill was developed when I was in university because there was so much free time. There was so much spare time that I could use to develop my leadership skills through the various activities and organizations. And since I didn't live with my parents when I was in the university, I lived in a student hostel by myself, I had to manage my time, manage my activities every day.

Thirteen participants felt that their formal schooling experience was not very supportive for leadership development. Alluding to the quality of the formal leadership training provided by his school, Robby said that “it had minimal impact on his leadership development”. Furthermore, access to formal leadership training was typically limited to those with formal leadership roles in school-based clubs or organizations. Not surprisingly, only 23.68% said that their schools provided formal leadership training and seminars.

Table 28

Leadership Development In-School and Out-of-School

Item	Theme	Frequency	%	Representative Quote
In what ways were your in-school experiences supportive of your leadership development?	Schools provided indirect leadership training	16	42.11	I think I grew in my leadership experiences because of the extracurriculars that I took, not because of academics. Because after school, I could manage my time, what time I should learn or study, what time I should go to the course, what time I should practice or something. I learned because I had so many activities.
	Not supportive for leadership development	13	34.21	In my organization we are encouraged to take a professional development course. For example, I took a situational leadership course…But, after the course I was still lost. It had limited impact.
	Schools provided direct leadership training	9	23.68	I think that the student government taught the leadership skills. I think the mandatory programs that I participated in taught about leadership. There was a program with leadership components that I participated in during my school years.
In what ways were your out-of-school experiences supportive of your leadership development?	Direct leadership training	11	28.95	During my high school, one that also useful was Forum Indonesia Muda. Forum Indonesia Muda is like a future leader organization, which they have this one-week training, mainly topics related with leadership.
	Indirect leadership training	8	21.05	I volunteered to do more than what is expected from me, for example, group leader or help to list down what things that other team members have to bring, send out reminders, something like that. I'm not sure whether that was leadership at that time. Now I realize yes, I deliberately appointed myself to be the organizer and leader.
	None	19	50.0	I cannot think of any.

Approximately half of participants had out-of-school experiences that were supportive of leadership development. Eleven said that they participated in formal leadership programs, workshops, and training that directly taught about leadership skills. Participants also mentioned reading leadership books and watching online videos or podcasts about leadership. Being deployed as a Pengajar Muda was also an important leadership development experience. IM not only impacted participants' leadership skills directly, but also provided them with opportunities to further their leadership development. Eka, who came from a small village, said,

> I think access is one of the most important things (gained from Indonesia Mengajar). I never thought in my life that I could go overseas to study, because I didn't know how to get scholarships. I didn't have friends who were studying overseas, but after I went to Indonesia Mengajar, it expanded my access. There were so many people that received scholarships to study overseas.

Leadership was developed indirectly through participation in volunteer or other organizations and also interaction with family members. Anna described her family's influence on her leadership development in the following way:

> My leadership, I think was developed because my mother raised me with the value of being independent and make decisions on my own so that I can be resilient and I can be tough enough to face any condition, even the worst conditions. This was learned from my internal family, instead of from training or education, from books or other reference. Actually, I didn't get a lot of leadership lessons from organizational experience. I was influenced more by the upbringing of my family.

Outside of school, participants received leadership training through various formal and informal avenues.

Environmental Factors

Environmental factors in the PGM include the *home environment*, *peers*, *mentoring*, and *extracurricular time*.

Home Environment

Neighborhood and community characteristics. To get a sense of what kinds of environments participants grew up in, they were asked to describe their childhood neighborhoods and communities. Table 29 summarizes the most pervasive characteristics used by participants in describing the communities and neighborhoods they grew up in. Not surprisingly, the majority of participants (78.95%) grew up in Java. Some participants had many friends in the neighborhood, while others reported only having a few friends. Seven participants reported living in a housing complex with other middle-class families. Three participants reported moving frequently as a child and living in multiple cities.

Table 29

Neighborhood and Community Characteristics

Item	Theme	Frequency	Percent
Tell me about the neighborhoods and communities where you grew up. Where did you grow up? Describe those places.	Within Java province	30	78.95
	Outside of Java province	8	21.05
	Relatively large city	21	55.26
	Relatively small city	17	44.74
	Not many friends in the neighborhood	8	21.05
	Many friends in the neighborhood	5	13.16
	Lived in a housing complex	7	18.42
	Lived in a military complex	2	5.26
	Close-knit community	5	13.16
	Moved frequently	3	7.89

Family characteristics. The majority of participants (89.47%) lived with their immediate family members (i.e., father, mother, and siblings) while growing up. Only four participants lived primarily with non-immediate family members, typically grandparents or aunts/uncles. Participants usually lived with non-immediate family members due to economic reasons, for

instance, when parents need to work in another city/region. Living arrangements often changed throughout participants' lives due to divorce/separation, death or illness, and financial hardship.

Table 30

Family Characteristics

Item	Theme	Frequency	%	Representative Quotes
Who lived at home?	Immediate family members	34	89.47	
	Non-immediate family members	4	10.53	
How many siblings do you have?	Four	2	5.26	
	Three	8	21.05	
	Two	19	50.0	
	One	9	23.68	
	None	0	0	
Where do you stand in birth order?	First	10	26.32	
	Middle	16	42.11	
	Last	12	31.58	
Who was your primary caregiver(s)?	Mother	26	68.42	
	Father	5	13.16	
	Grandmother	4	10.53	
	Other family members (e.g., older siblings, aunts, or uncles)	4	10.53	
In your family, who were you closest to?	Siblings	15	39.47	
	Mother	15	39.47	
	Father	5	13.16	
	Grandparents	2	5.26	
	Other family members (e.g., aunts & uncles)	3	7.89	
Why?	Frequent contact	11	28.95	My mother is basically the one I am closest to…I realized that it is because I spent a lot of time with her.
	Trust and ease of sharing	11	28.95	Because I feel comfortable to talk to her about many things.
	Gives good counsel	4	10.53	After that she moved to another city, but until now, if I wanted to ask something, if I wanted an opinion about something, I will ask her because she will give a wise answer.
	Similar characteristics and values	3	7.89	I think from the five of us, sometimes I see myself in my second brother.
	Good role model	3	7.89	My younger brother, I could say, he is basically one of my role models.
Do you have any family members in the same profession or field? If so, who?	No	26	68.42	
	Yes	12	31.58	
	Parents	4	28.57	
	Siblings	5	35.71	
	Extended family members (aunt, uncle, nephew)	5	35.71	

Participants had between one to four siblings. Interestingly, no participant reported being an only child. Half of the participants had two siblings. Ten participants were first childs, sixteen were middle children, and twelve were the last. Primary caregivers were defined as the person providing immediate care to participants while they were growing up. More than half (68.42%) reported that their mothers were the primary caregivers at home. Fathers were typically seen as the breadwinner or financial provider of the family.

When asked who they were closest to in the family, an equal number answered siblings (39.47%) and mothers (39.47%). Reasons given include frequency of contact, level of trust, provision of good counsel, and having similar characteristics or values. Only 31.58% of participants indicated that they had a family member in the same profession or field. These include parents, siblings, and extended relatives (e.g., aunts and uncles).

Home characteristics. To get an overall sense of participants' childhood home environment, they were asked to describe their home life (Table 31). Eleven mentioned living in a resource-rich environment and growing up with access to books, magazines, newspapers, and other learning materials. Nine described their homes as being structured and disciplined. David, for example, described his home life as follows:

> My home life was too disciplined. I had to wake up before five o'clock, then I had to prepare myself for prayer, and then I have to go to the mosque to learn the Qur'an. Then at six o'clock, I had to help my grandmother sweep the floors and cleanup the house, then I had to go to school by seven o'clock. I came back home at twelve o'clock, then I would rest for about half an hour. Then I had to go to madrasah, which is a religion school. Then I had about two hours for playing. Then I had to go to home, then I had to head

back to the mosque to learn Qur'an again. Then I had to do homework. Every day I would repeat this.

In contrast, 15.79% described their homes as being more democratic, a place where children were free to make decisions on their own. Alana explained that her parents "gave me freedom in choosing what I wanted to do, and they really supported me in a positive way. But they were really strict in maintaining the time I spend outside of the house, my leisure time, especially if that will give me a bad influence." Seven mentioned having close relationships with their parents and siblings. These families did many things together, including eating daily meals, watching TV, and going on outings on the weekends.

Table 31

Home Characteristics

Item	Theme	Frequency	Percent	Representative Quotes
Tell me about your home life growing up. How would you describe your home life? --- Positive home experiences	Access to educational resources and opportunities (i.e., books, magazines, other learning materials, and courses)	11	28.95	I also grew up surrounded by books, newspapers, and reading materials. The adults in my household subscribed to the newspaper, so I was able to read since I was four or five years old...we also had a lot of books at home.
	Structured and disciplined homes (i.e., firm rules)	9	23.68	My mother was a very strict person and educated us to be an independent person. Since we were children, we had to make our bedroom by ourselves, to wash our clothes by ourselves, make the place clean.
	Warm and close relationship between family members (i.e., spent a lot of time together, ate meals together)	7	18.42	It's mandatory for us to have breakfast together. Every morning, when my siblings and I were having breakfast, then my dad will leave for work. Then after dinner, we usually gathered in front of the television, to wait for my dad to come back home. I can remember that we went to events a lot, we went to the circus together, for example. We liked to go out as a family.
	Democratic homes	6	15.79	It was freeing at home. Free as in we could do what we thought we could do. There were not much of boundaries for this or that.
Tell me about your home life	Dual-income households	7	18.42	On the weekdays it's basically the same, I hardly saw them. I remember just

growing up. How would you describe your home life? --- Negative home experiences				watching TV on the weekends and learning computer from my father.
	Parents had strained marriages, separated, or divorced	7	18.42	My parents got divorced when I was in junior high school. Since then, I had to think about myself more. I moved to my grandparents' house, which was closer to my school.
	Family experienced financial constraints	5	13.16	I think we were fine up until the 1998 monetary crisis. I think that's what hit us. I didn't realize when I was a kid. I only realize it now how difficulty and economy can impact your family wellbeing. My parents started to fight, we started to limit our vacations. I think they were just very, very tired with what life has given them and they just simply couldn't give what parents should give.
	One or both parents died early	8	21.05	When my mother passed away, it was a great change to my family and especially to myself. When I was a kid, sometimes I got bullied. There was a time when I didn't like to be in school, I wanted to go home as early as possible. The only one that really understood how I felt and who I felt safe with was my mother.
What family values were emphasized or taught in your home?	Service	14	36.84	My father told me, "Whatever you want to do, do it. As long as it's good. But if you want to do something, remember the impact of your actions. Don't just think about your pleasure."
	Good work ethic	14	36.84	Our parents always told us that if want something, we need to work hard for it. If we had a problem, we can surely resolve it with hard work. We should not give up easily. Our parents always told us how much more challenging their lives were.
	Education	11	28.95	Education was very, very important. Because they did not want their children to become like them. That was always discussed at home. So they always supported anything related to education – training and things like that.
	Religious piety	10	26.32	My mom always taught me that I should never leave praying, never leave practicing my religious beliefs.
	Independence	6	15.79	My mom enabled me to make a lot of decisions myself.
	Success	3	7.89	I always wanted to be the best. That's what I saw in my big brother and also in my other family members.
	Family	3	7.89	For my mom, family was important. I still need to be rooted and connected

				with the extended family, like my cousins, my aunties.
If any, what duties and responsibilities did you have at home?	House chores	24	63.16	E.g., cleaning the house, caring for pets, laundry, cooking
	Duties outside the house	5	13.16	E.g., manage family store, sell snacks at the market
	Caring for younger siblings	3	7.89	E.g., babysitting, supervising homework
	None	11	28.95	I.e., primary responsibility was studying

Less positive home experiences include having both parents working full-time and being raised primarily by domestic helpers or other relatives as a result (18.42%). Yessica said, "What I really remember is my parents were busy with work. My housemaids were taking care of me most of the time." As a result, those participants did not feel they have a close relationship with their parents. During their early years, seven participants experienced their parents' separation or divorce. Arief, for example, described the tension that defined her home life growing up:

> I was raised in a family where my parents were always fighting. I'm not sure if that's called a broken home or not. But every day, I would see my parents fight. I think one of the main reasons was the difference in the income between my mom and dad….They would fight about everything – from the small things to the big things. They would throw phones, throw things. Broken plates were an everyday occurrence.

Five participants mentioned that, at some point, their families experienced financial constraints. This often led to increased tension in parents' marriages, lifestyle changes, and challenges in completing their education. Eight parents also mentioned having gone through one or both parents' death while they were growing up.

Participants were asked to identify the values that were taught or emphasized in their homes while growing up. The top three values mentioned were service (36.84%), good work ethic (36.84%), and education (28.95%). In describing how her parents emphasized the value of service and making an impact, Alana said, "My mother and my father said I don't need to be a

rich person, but I need to be a person that brings benefits to my surroundings." In these homes, children were taught to prioritize others' needs over their own and how their behaviors impact other people. The second most-cited value was the importance of having a strong work ethic. This includes being hard-working and exercising integrity in all aspects of life. P, for example, mentioned the following advice given by his father, "Always do what is right, not what other people tell you to do."

Education, and the attainment of it, was the third most-cited value in participants' homes. Education was seen as the way out of poverty. Spending on education was prioritized over all other things. William, for example, described how his family chose to invest their limited resources into his education, rather than in purchasing luxury items like cell phones and motorcycles. He added that he did not even own a cell phone all through university because all financial resources were directed towards his education. Another participant, William, described how his father would go to great lengths to meet his educational needs. He said,

> When I was in middle school, I wanted to have mathematics tutoring in addition to the school hours. I had so many wants, not really needs, just wants. I also wanted to learn English in my middle school and my father also registered me to take an English course. My father will give anything I ask if it is for the sake of learning, like computers. When it came to learning the computer - the highest education that my father got was only elementary school, but he learned how to use computer just so that he can teach me.

It was common for parents to make significant personal sacrifices in order to meet their children's educational needs, for example, by taking on multiple jobs.

The majority of participants (63.16%) grew up in homes that assigned them chores and responsibilities. These include cleaning the house, caring for pets, washing clothes, and cooking

for the family. Other responsibilities include caring for siblings, helping with the family business, and helping to earn additional income outside the home (e.g., selling drinks or snacks). Only 28.95% mentioned not having any responsibilities aside from studying and earning good grades.

Parent characteristics. Participants were asked the following open-ended question about their parents: “What was your father like as a parent? What was your mother like as a parent?” Responses were then categorized based on the parenting styles first introduced by Baumrind (1971) - authoritative parenting, authoritarian parenting, permissive parenting. Another category – neglectful parenting –introduced by Maccoby and Martin (1983) was also included. Authoritative parents provide freedom with limits, encourage independence, give reasonable discipline and expectations, and communicates warmth. Authoritarian parents generally exercise control over most decision-making, permits less autonomy, and maintains strict discipline. Permissive parents avoid controlling or placing demands on their children, set few boundaries, and exercise minimal discipline on their children. Uninvolved parents may be physically present with their children but do not participate actively in their rearing and development.

Table 32

Parent Characteristics

Theme	**Father (%)**	**Mother (%)**	**Representative Quote**
Authoritative	36.84	73.68	My mother is the opposite of my father because she is a cheerful person and a super warm person. Anything that I want to talk to her, I'm free to talk to her. She never judged me on anything. Even though I share something that maybe was unusual to share between kids and their mom, but my mom is a super open-minded person. I am super comfortable to share anything with my mom.
Uninvolved	26.32	0	My father took on several jobs to fulfill the needs of the family…As I was growing up, I was not very close to my father. My father did not really understand much about me, I think. Maybe because he's

			busy…because he has five children, something like that.
Authoritarian	18.42	15.79	Actually, my father was like a dictator when I was a child. We had to follow his rules. My father was very strict, both my father and my mother…They pushed their children to follow their rules. Even in choosing our majors.
Permissive	10.53	2.63	My dad is the person I always go to to get a "yes". If I need to find a "yes" for something, I will go to my dad instead of my mom. Even though most of the time he will say like, "Ask your mom", but eventually, I will end up getting a yes from him.
N/A (due to death, divorce, or being cared for by other relatives)	7.89	10.53	My parents got divorced and my grandmother was the one who raised me.

The majority of fathers (36.84%) and, to a much larger extent, mothers (73.68%) were described as authoritative parents. They were seen as supportive, warm, and "not overly protective". Growing up, these parents allowed their children to make decisions on their own, while providing guidance and boundaries in the home. Amelia described it as being given "space to develop myself". Participants often mentioned having a close and comfortable relationship with these parents. Sarah gave the following description of her mother:

> She was very keen to learn, so she exposed herself to parenting stuff. which was rare during that time. She learned this technique of asking, like validating opinion from children, which was also rare during that time. Growing up I was very happy to have that kind of mother. I was very close with my mother because, it was very comforting to have a mother who always asked how the day went and how are your friends…stuff like that.

Interestingly, only fathers (26.32%) were mentioned as being uninvolved. It was not uncommon for fathers to work in different cities or provinces or take on multiple jobs to meet the family's needs. As Aulia puts it, "As a parent, my father was the one who protects from afar. Since young, my father always worked in faraway places, so none of us children were close to him." Participants often mentioned that their fathers were extremely hard workers and their duties and obligations caused them to be uninvolved with their children. Occasionally, fathers

were physically present in the home but did not actively parent their children. This may reflect a societal norm that treats child-rearing as the sole responsibility of mothers. In describing her relationship with her father, who lived at home, Kirana said, “I'm not close with my father. He is very distant. I don't think he knows how to actually take care of children, be close to them. And mom complained a lot about it. I was dissatisfied with my dad.”

Fewer parents were described as being either authoritarian or permissive. Authoritarian parents were described as being strict disciplinarians, controlling, and over-protective. Arief described his mother in the following manner:

> She was known as someone who was very *galak* (fierce). Because she was always direct. She gave us specific instructions, always directing. No. Yes. No. Yes. No. Yes. No. Yes. No. You can’t. You can’t. You can’t. If we wanted to play with our friends on Saturday, we needed to first memorize our multiplication table.

Similarly, another participant, Alya, described her mother as being very strict, “she dictated what I ate, everything I did, she was very strict. I lived in a house that was full of her rules.” In contrast, permissive parents were described as being easy-going and non-directive.

Parental involvement and expectations. Parents were typically involved indirectly in their children’s leadership development. As Michael puts it, “I don’t think they saw leadership as something to be pursued”. Similarly, William said, “I think my leadership development comes mostly from my school environment, not from family and parents.” Nonetheless, participants acknowledged that their parents’ indirect contributions were still significant to their development. Michelle, for example described her parents’ influence in the following way:

> I don't think they contributed directly such that I can pinpoint the ways that they taught me about leadership. I think they exposed me to different things and kept me curious,

and always facilitated the things that I wanted to do. That's the biggest contribution that they have in building my leadership because without that support, I wouldn't be able to even get involved in those organizations or activities.

Indeed, many of the participants noted how the freedom to explore and make their own decisions aided in their leadership development. Anna, for example, described her parents' involvement in this way:

> The fact that they were giving me so much freedom to pursue a lot of other things aside from my studies, without me knowing, that was a training ground for me to become the leader I am today, because otherwise, I would not have the opportunity to learn or the opportunity to train as a leader.

Even though parents did not provide direct leadership training, they were generally supportive of opportunities that aided the development of leadership skills.

Table 33

Parental Involvement and Expectations

Item	Theme	Frequency	Percent	Representative Quote
How involved were your parents in your leadership development?	Indirect involvement	26	68.42	Not so much…I don't think that they saw leadership as something to be pursued.
	Direct involvement	10	26.32	I think they were very involved. For example, my mom shaped my character a lot.
	None	2	5.26	I don't really think that my leadership skills came from looking at them.
Did they have high expectations of you? How so?	High expectations	23	60.53	Like when I graduated from high school, they expect me to go to a favorite public university. Then, I made it. I went to UGM. Basically, they expected me to be high achieving. Also, you have to achieve high GPA. You have to graduate cum laude.
	Absence of high expectations	12	31.58	Not at all. My mom always goes with the flow. When I tried to speak to her about choices, she always answered me, "Within you, you know which choice you should take. Why should you ask me? You know where to go, you know the direction. You know the path you have to take."
	N/A (did not grow up with parents)	3	7.89	

Participants who indicated that their parents were directly involved in their leadership development described them as being role models and exemplary figures. Parents were leaders in the community and through their own actions, taught their children about leadership. Sometimes, parents' leadership styles served as examples of the kind of leaders one should not be like. Parents also encouraged children to take on leadership roles in school or in religious organizations. Kirana, for example, described how her mother convinced her elementary school teacher to give her the opportunity to become class leader.

The majority of parents were described as having high expectations for their children (60.53%). Expectations were generally related to earning good grades, entering prestigious schools and universities, and working at reputable companies upon graduation. Amelia described her parents' expectations in the following way:

> The first expectation, we should go into a prestigious university, prestigious school, from junior high school, senior high school and university. Very high expectation on that. Since I was in primary school, when I was ranked second in class, she would say, "Why did you only get second rank when your other friends could be number one? If your friends can do that, you can also do that." So that motivated me to earn first rank - because of my mother.

Twelve (31.58%) indicated that their parents did not set high expectations for them. These parents generally allowed their children to choose their own paths and did not put pressure on them to achieve specific goals. Michelle, Alana, and Yessica had parents who allowed them to choose their own schools and majors. They only encouraged, but did not pressure, their children to earn good grades.

Peers

Peers have been shown to be an important source of influence, especially in the later years (Paik, 2015). Questions relating to *peers* explore the ways in which peers influence participants' leadership development during the school years and now. Additionally, participants were also asked about how colleagues at work influence their leadership development now.

Peer and colleague influence. During the school years, 39.47% of participants reported receiving emotional support and encouragement from their peers. These include help from seniors in adjusting to university life and encouragement during challenging times. Several participants also mentioned how peers were among the first to recognize and affirm their leadership skills and pushed them to take on leadership roles. For some, peers were instrumental in their decision to pursue graduate education. During the school years, peers also provided positive challenge and competition (34.21%). For example, Sarah described how having competitive peers motivated her to continuously learn and improve herself.

Table 34

Peer and Colleague Influence During School Years and Now

	Peer influence in school years (%)	**Peer influence now (%)**	**Colleague influence now (%)**	**Examples**
Emotional support and encouragement	39.47	34.21	36.84	One thing for sure is that being active in church helped me a lot to go through those difficult times because I had close-knit friends or close-knit group of friends. They always supported me and they knew what happened to me personally and my family. They helped me a lot during those difficult times.
Competition and challenge	34.21	2.63	0	When I was in high school, I found a really good environment because I was surrounded by people who have dreams, who know what they want to do in the future, and unconsciously they shaped me, too.
Feedback and problem-solving	21.05	44.74	34.21	As a Pengajar Muda, we were placed in a team, made up of people from different backgrounds. They were the ones who were able to give me feedback to improve myself. I received a lot of

				feedback and correction from my team when I was a Pengajar Muda.
Mentors and role models	10.53	15.79	10.53	Another mentor that I had, I would call these two people my peer mentors. I share a lot of things with her. The ideas that I have, or problems at work, or in general, we chat about a lot of things. Sometimes when I feel very overwhelmed, like we had conversations, sometimes she will help me map the problems, map the issue.
Access to opportunities	0	0	5.26	Professionally, they got me connected to important people because I felt like I was new in the field, so they taught me a lot about the business industry.

Peers play a more important role in providing feedback, correction, and problem-solving now (44.74%) than during the school years (21.05%). In addition to seeking advice and perspective from peers when facing problems, participants also mentioned going to specific people for specialized knowledge and skills. Alya illustrated how her peers from Indonesia Mengajar continue to provide support for each other even after deployment,

> Each (Pengajar Muda) has a different background and expertise. So, for example, if I have a project involving special needs children, I would go to my friends who are in psychology. So, in terms of technical support that's what I do.

Similarly, Audrey said that she learned about many pedagogical strategies and received feedback about her teaching from her peers.

At work, colleagues influenced participants in similar ways as peers. Like peers, colleagues provide emotional support and encouragement (36.84%) and feedback and problem-solving (34.21%). Two participants mentioned that their colleagues provided access to opportunities and people that has led to increased knowledge or promotion at work. Muthia, for example, mentioned how her supervisor selected her to participate in a training program that was typically reserved for more senior employees. In addition to gaining new knowledge and skills,

the experience of being selected to participate in the program also increased her confidence at work.

Although mentioned less frequently, peers and colleagues can also serve as important mentors and role models. Participants mentioned looking up to peers and colleagues who were good leaders and experts in their field. Rahmat, for instance, said of his colleague, “She's an ambitious person and she's also a hardworking person. In that sense, she sets a role model, she becomes a role model to all of us.” Supervisors at work often demonstrate to participants what kind of leader they should or should not be. Participants reported frequently seeking advice from people they consider mentors and role models.

Mentoring

The PGM includes formal and informal mentoring avenues such as coaching, advising, instruction, and skill-building (Paik, 2013). This section reports results for questions related to mentors, role models, and mentees.

Mentor characteristics. Participants were asked about the mentors they have had throughout their life. Seven participants stated explicitly that they had more than one mentor, while seven participants indicated that they have never had mentors. Others named between one to three mentors that were influential in their lives. The most-frequently mentioned mentors were peers (36.84%). These include fellow young teachers during the Indonesia Mengajar deployment and seniors in high school or university. Supervisors at work (34.21%) were the second most-frequently mentioned mentors. Formal mentors through leadership programs (23.77%), such as Indonesia Mengajar, and school-based mentors (15.79%), such as teachers, coaches, and lecturers, were also named.

Table 35

Characteristics of Mentors

Item	Theme	Frequency	%	Representative Quote
Tell me about your mentors. Who were they? What is your relationship to them?	Peers	14	36.84	
	Supervisor at work	13	34.21	
	Formal mentors through leadership programs	12	23.77	
	School-based mentors	6	15.79	
	Parents or caregivers	5	13.16	
	Older siblings	3	7.89	
	None	7	18.42	
How did they influence and support you?	Provided guidance and support	20	52.63	He believed that I had potential from the very beginning, that I have something that can be useful in the future and that it needed to be sharpened.
	Served as a role model of leadership	9	23.68	He is people oriented. He loves to talk with people from many layers, from the top management to the very, very low level until the office boy or office girl.
	Presented challenges	6	15.79	They always challenged me to think of unexpected answers. Like when you see a situation there's always another explanation to it.
	Provided skills and knowledge	6	15.79	HH was one of the trainers that transferred so many knowledge and skills about teaching, organizing a class, adaptation to a new culture.
	Provided opportunities for discussion	4	10.53	We can talk anything about the country, about issues in the world, issues in Indonesia, any kind of issues.
Who was the most influential in your leadership development?	All mentors were equally influential	7	18.42	
	Supervisor at work	8	21.05	
	Parents or caregivers	5	13.16	
	Indonesia Mengajar personnel	3	7.89	
	Peers	3	7.89	
	School-based mentors	2	5.26	
	Public figures	2	5.26	
	Older siblings	1	2.63	
	No mentors	7	18.42	
Why?	Impacted leadership development	13	34.21	That’s why I think my mentors from Indonesia Mengajar are the most influential because they shaped who I am today, my current leadership style.
	Provided valuable guidance	7	18.42	He's really good, sometimes he was able to pinpoint a thing that I didn't even see or asking me to look at things from an angle that I didn't even see.
	Duration of mentorship	4	19.05	Because I spent almost three years working with her.

When asked about how mentors influenced and supported them, most participants (52.63%) indicated that their mentors provided guidance and support. Mentors often were the ones encouraging participants to take on leadership roles, participate in competitions, or apply for various learning opportunities. Some mentors, such as Yessica's older sister, were more directive in their guidance and support. Yessica said that her older sister forced her to attend courses (e.g., public speaking) that eventually helped develop her leadership skills. Mentors were also selected because they were exemplary leaders in the university or workplace (23.68%). These were individuals whom participants wanted to emulate in terms of leadership and influence. Mentors' influence also came in the form of presenting challenges, providing relevant skills and knowledge, and opening up opportunities for discussion about various topics.

Participants were then asked to name their most influential mentor. Seven indicated that all their mentors were equally influential, or that they were influential for different aspects of life. For example, Priscilla said that all her mentors "are complementing each other". Hence, it was difficult for her to identify just one mentor who was most influential. Other participants named their supervisors at work (21.05%) and parents/caregivers (13.16%) as their most influential mentor. Participants who were able to name the most influential mentor were asked why they were the most influential. Thirteen participants said that these mentors directly influenced their leadership development. For example, Brenda described how IM trainers "transferred so many knowledge and skills, about teaching, organizing a class, adaptation to a new culture". They were most influential to her because "they shaped who I am today, my current leadership style." Four participants mentioned that mentors were most influential because of the length of the mentoring relationship (three years or more).

Role models. Participants were also asked to name other role models or key individuals in their leadership development. Twelve participants named public figures as their role models. Indonesian role models include Anies Baswedan (Jakarta Governor), Sukarno (first President), B.J. Habibie (former President), Sri Mulyani (Minister of Finance), and Tri Mumpuni (social entrepreneur). Non-Indonesian role models include Hilary Clinton, Michelle Obama, Oprah, and Steve Jobs. Parents and other family members (21.05%), peers (13.15%), and supervisors at work (10.53%) were also named as role models.

Table 36

Role Model Characteristics

Item	Theme	Frequency	%	Representative Quote
Other than your mentors, who were other role models or key individuals in your leadership development?	Public figures	12	31.58	They are brave, outstanding...they do things that so many other women do not do.
	Parents and family members	8	21.05	Actually, my father became one of my role models because he is a super honest guy.
	Peers	5	13.15	I would say my friend…He's two, three years older than me, he was very good at leading his organization. Whenever I faced an issue, I would talk to him and he would advise me.
	Supervisor at work	4	10.53	My current manager at work… I think the way he handles people, the way he never really take anything personally. The way he manages his time, he's a manager but he can have a work and life balance, so that's really great for him and his family.
	Teachers, coaches, or lecturers	4	10.53	I think she gave me an example of how to lead people because she was very close to each of her students. In my opinion, being a teacher is also being a leader because you are the leader of the class. Right? In that sense, she gave me a lot of examples, how to lead people and how to manage the students, how to manage the class and how to overcome some problems that might arise during the lesson.
	No role models	5	13.15	To be really honest, I'm not a person who…Some people are like, "I like to see, for example, Obama or any kind of president." I'm not really big on those things. I don't really look for figures. If I see someone doing something good, I will learn from them…but I don't really have a role model.

Mentee characteristics. Table 37 lists the top three characteristics participants look for in a mentee. The themes mentioned most frequently were *willing to learn* (65.79%) and *strong goal-orientation* (65.79%). *Willing to learn* includes being a lifelong learner, a good listener, curious, and having humility to receive feedback from others. Rama referred to this characteristic as "learning agility" and defined it as the "ability to unlearn and learn something new". He added,

> Now, we have tons of information coming, and if you are not learning something new, it is on you. The access to it is everywhere, books are everywhere, you can got a lot of information everywhere. If you don't have that kind of initiative of learning something new, it means you're saying no to your personal development.

In addition to being a continuous learner, participants highlighted the importance of possessing traits related to a *strong goal-orientation*. This includes having clear goals, strong determination, initiative, commitment, and discipline. As mentors, participants preferred to have mentees who "know what they want". Participants also mentioned the need for resilience, grit, and perseverance in overcoming challenges to reaching those goals. Brenda referred to this trait as the ability to "bounce back from lowest points in life".

Table 37

Mentee Characteristics

Item	**Theme**	**Frequency**	**%**	**Representative Quote**
What are the three most important traits you would look for in a mentee?	Willing to learn	25	65.79	We need to always learn because we never stop learning. Even though we are already able to do one thing, but I think there will still be many things to be learned.
	Strong goal-orientation	25	65.79	They should tell me what they're going to achieve or what they want to achieve through my assistance.
	Adequate abilities	13	34.21	I would look for a mentee who wants to learn, and has some basic knowledge and skills.
	Positive attitude	13	34.21	I think their attitude,…just a positive person, non-toxic person.

	Integrity	10	26.32	Honest…with himself or herself, but also honest towards others.
	Good interpersonal skills	8	21.05	Because even though we are very smart, even though we can work hard…but in the end, if we cannot cooperate, we cannot achieve greater things because to have that we have to be able to manage resources.

Adequate abilities include being bright, competent, a fast learner, and a critical thinker. *Positive attitudes* include traits such as optimism, open-mindedness, and courage. Participants also mentioned characteristics such as having a growth mindset, inclusive perspective, and not fearing failure. *Integrity* includes the willingness to be honest with themselves and others, and also being vulnerable with the mentor. *Good interpersonal skills* include mentee's ability to communicate, work with other people (including the mentor), show appreciation to others, and network. Interestingly, one participant said that their mentees should be someone similar to them.

Extracurricular Time

The PGM asserts that time spent outside of school is as important as time spent in school. Extracurricular time use during the school years include time spent participating in after-school clubs and organizations, faith-based organizations, academic/non-academic courses, television-viewing, internet-surfing or other technology usage, and leisure time with family and friends (Paik, 2013; 2015). Post-school years, extracurricular time refer to activities conducted outside of regular working hours. The *extracurricular time* factor in the PGM also includes hobbies and interests that occupy significant portions of one's time.

Extracurricular time use. Table 38 compares participants' extracurricular time use during the school years and now. The top three extracurricular activities during the school years were participation in *organized activities* (52.63%), *socializing with friends* (47.37%), and

reading (34.21%). Ten participants mentioned that they were active in religious organizations during their school years. It was not uncommon for some to visit the Mosque daily to learn to read the Qur'an, pray, and worship with other youth. Other forms of *organized activities* during the school years include sports and performing arts groups. *Socializing with friends* was another important activity outside of school. Participants described spending a lot of time outdoors, riding bicycles, exploring, and just talking with their friends. Participants also reported spending a lot of time *reading* books, magazines, and newspapers during their school years. Some also indicated that they preferred being at home alone and *reading* rather than *socializing with friends*.

Table 38

Free Time Usage During School Years and Now

Time	Theme	School Years (%)	Now (%)
Tell me about what you do when you're not in school or working. How did you spend most of your free time during your school years (preschool to university & beyond)? How do you spend most of your free time now?	Organized activities	52.63	10.53
	Socializing with friends	47.37	7.89
	Reading	34.21	26.32
	Family time	21.05	13.16
	Watching TV/movies	21.05	10.53
	Studying	5.26	0
	Working (paid job)	2.63	0
	House chores	2.63	0
	Online or social media	0	34.21
	Exercise and relaxation	0	36.84

In contrast, the top three after-work activities now are *exercise and relaxation* (36.84%), *spending time online or on social media* (34.21%), and *reading* (26.32%). It is interesting to note that participants mentioned *reading* less as adults as there are more activities competing for their free time, for instance, watching videos online and browsing social media. As adults, participants spend more time participating in activities that promote physical and mental well-being. Activities include meditation, practicing mindfulness, exercising, walking, writing,

travelling, and sleeping. As adults, participants also reported spending less time in organized activities, including religious activities.

Hobbies and interests. Table 39 compares participants' hobbies and interests during their school years and now. The top three hobbies/interests during the school years were *reading* (36.84%), *arts/music* (23.68%), and *watching TV/movies* (15.79%). Participants who mentioned being interested in *arts/music* said they enjoyed dancing, listening to or playing music, drawing, painting, and making crafts. Four participants mentioned enjoying writing poetry and journaling, a hobby that continues into their adult years. The top three hobbies/interests now are *reading* (23.68%), *recreational activities* (26.31%), and *writing* (10.53%). Recreational activities include travelling, meeting friends, cooking/baking, and meditating.

Table 39

Hobbies and Interests During School Years and Now

Item	Theme	School Years (%)	Now (%)
What hobbies and interests did you have during your school years (preschool through university and beyond)? What hobbies and interests do you have now?	Reading	36.84	23.68
	Arts and music	23.68	7.89
	Watching TV and movies	15.79	5.26
	Recreational activities	13.15	26.31
	Writing	10.53	10.53
	Sports and exercise	10.52	5.26
	Online and social media	0	7.89

Contextual Factors

Significant Events

The PGM framework highlights the influence of contextual conditions in individuals' lives. Contextual factors may include historical/political and personal events and also individual/familial characteristics such as gender, ethnicity, and religion (Paik, 2013; Paik, Gozali, & Marshall-Harper, 2019). Individuals typically exercise little control over contextual factors, yet they can have significant impact on their leadership development.

Historical and political events. Participants were asked to name historical or political events that have impacted them significantly. Only eight participants responded to the question. Five mentioned being affected by the May 1998 riots in Indonesia, two by the imprisonment of Ahok, Jakarta's former governor, and one by the Aceh Tsunami in 2004. For six of the participants, the events, although negative in itself, became a compelling source of motivation. As a mixed-race child, Kirana described the identity crisis she experienced during the May 1998 riots that involved violence between Indonesians of Chinese and native descent. She said that the experience eventually helped to "enforce my identity as an Indonesian" and has led to her passion for development in Indonesia. Similarly, Anna reported being angered at the unjust imprisonment of Jakarta's governor, and that event eventually spurred her to enter politics. Two participants reported being impacted negatively by the events. For Robby, the natural disaster became a source of fear that has been difficult to forget. For Cindy, the financial crisis brought about by the May 1998 riots changed her family dynamics. She described how her parents began to fight a lot and she spent less time with her father as he had to take on multiple jobs to support the family.

Table 40

Impact of Historical and Political Events

Item	Theme	Frequency	%	Representative Quote
In what ways have any historical, political, or other events affected you in your lifetime?	May 1998 riots	5	13.15	
	Imprisonment of Ahok	2	5.26	
	Aceh Tsunami 2004	1	2.63	
Positive impact	Became a source of motivation	6	15.79	The riots helped enforce my identity as an Indonesian. So, my work in development is specifically for Indonesia. My heart for development is not just for development, it's for development in Indonesia.

Negative impact	Became a source of fear	1	2.63	It really scared me and even until now I still wish that I could forget about those moments.
	Changed family dynamics	1	2.63	My parents started to fight, we started to limit our vacations. I think they were just very, very tired with what life has given them and they just simply couldn't give what parents should give. I think my father, especially, he always and always, always, always provided time for us, especially to pick up us from school or wherever our class was. He stopped accompanying us to study. I think he wanted to make more money when I was in elementary school. That's why he started to take night shifts.

Personal life events. In addition to historical and political events, participants were also asked to identify personal life events that have significantly impacted them. Participants reported a variety of positive and negative life events. Positive personal events include being deployed as a Pengajar Muda (26.31%) and studying abroad (13.16%). Negative personal events include death of parent/caregiver (21.05%), parents' divorce (10.53%), and financial hardship (10.53%). Interestingly, when asked about the impact of those events, all participants, including those who reported experiencing negative life events - reported being positively impacted. Participants mentioned that those personal events became an important source of learning (34.21%), motivation (10.53%), and transformation (10.53%). Experiences such as studying abroad and parents' divorce were viewed as opportunities to develop independence, resourcefulness, and resilience. Similarly, a friend's sudden death or a diagnosis of illness became the driving force in pursuing higher education or starting a foundation. Participants also reported experiencing a change in mindset or perspective, and becoming a better person, as a result of going through those events.

Table 41

Impact of Personal Life Events

Item	Theme	Frequency	%	Representative Quote

In what ways have any <u>*personal life events*</u> *affected you? Positive life events*	IM deployment	10	26.31	If we talk about significantly affected me in terms of making me more mature, more-- to be a better person, I think it is my experience of being a Pengajar Muda. It was very memorable experience. It was not the hardest part of my life actually, but it gave me a lot of perspective, knowledge and valuable experience. It has affected me most right now.
	Living or studying abroad	5	13.16	When I was in Germany. In the first year, I thought that was a very bad year. Because it was a different culture, different people, so I had to learn about this country more. About the people of this country, about how to make a good influence in that community. That was a huge influence for me personally.
In what ways have any <u>*personal life events*</u> *affected you? Negative life events*	Death of parent/caregiver	8	21.05	When my mother passed away, it was a great change to my family and also to myself. When I was a kid, sometimes I got bullied. There was a time when I didn't like to be in school, I wanted to go home as early as possible. The only one that really understood how I felt and who I felt safe with was my mother.
	Parents' divorce	4	10.53	My parents' divorce changed my life significantly in so many different ways. It really changed not only my life, but also my siblings, my closest inner circle at that time. They who used to be my support system were being taken away and I had to start everything from very beginning, very hard time. It was very hard for me and finally I managed to overcome it.
	Financial hardship	4	10.53	I only realize it now how financial difficulties can impact your family wellbeing-ness. My parents started to fight, we started to limit our vacations. I think they were just very, very tired with what life has given them and they just simply couldn't give what parents should give.
	Death of friend or mentor	3	7.89	The most significant event in my life was when my best friend passed away, and that was back in 2010.
	Discrimination (gender, racial, religious)	3	7.89	I think I did a really good job there but then, towards the end of the internship, this manager who was the most influential manager unfortunately, said to my boss that while he acknowledged that I did a really good job, he would not hire me because unfortunately, I was a woman and I was Catholic.
	Health issues	2	5.26	I was diagnosed with thyroid cancer, and also an auto-immune condition. That's like the lowest point in my young adult life.

	Near-death experience	1	2.63	I then wore hijab because of a near-death experience I had. This was a huge event that changed me. I almost died. In the middle of the sea, I almost died, the boat rudder broke, the wood broke. We were in the middle of the sea and the waves were five meters high, they were so high. We had nothing to hang on to in the boat. Everyone was already holding hands with each other, then I just thought, "Oh Allah, I really want to wear a hijab, and I'm so scared to die."
	Changes in family	1	2.63	It's when my older sister got married. During my last year of my senior high school, yes. I guess that's one of the reasons why I tried to be a different person or try to be a better version of me, because most of the time I had no friend apart from my sister. When she got married, it felt like I broke up with her.
Positive Impact	Source of learning	13	34.21	I had to work and study at the same time. That condition made me learn a lot about life, learn a lot about who I am, what I want, what I want to do, what I want to be. Even though they were very hard times, I was struggling very much, but then in the end, I can feel the lessons and benefits. It shaped my perception. It shaped my way of thinking, way of seeing something.
	Source of motivation or inspiration	4	10.53	It pushed me to achieve what she wanted to achieve. She had dreamed of studying in UNPAD, and that's one of the motivation for me to get a scholarship there.
	Source of transformation	4	10.53	Maybe when I was diagnosed with cancer, that was an event that affected me a lot. My priority has changed since that time. I put my health over everything.
Negative Impact	0	0		

Opportunities and Barriers

Participants were asked to identify any additional opportunities or barriers to their leadership development. This question allows for more subjectivity in participants' responses as the same event may be viewed as an opportunity by some and as a barrier by others.

Opportunities for leadership development. Participants were asked about additional opportunities for leadership development. Responses were similar to what was already mentioned in earlier parts of the interview. Four participants named studying and living abroad

as a positive contribution to their leadership development. Other opportunities mentioned include participating in competitions, volunteer programs, and various projects. Being given autonomy at work was also considered an opportunity for leadership development.

Table 42

Opportunities for Leadership Development

Item	Theme	Frequency	Percent
Describe opportunities that helped promote your leadership development	IM deployment and training	7	18.42
	Projects and presentations	5	13.16
	Living or studying abroad	4	10.53
	Clubs and organizations	3	7.89
	Competitions	2	5.26
	Volunteer opportunities	2	5.26
	Formal leadership training	1	2.63
	Autonomy at work	1	2.63
	None	15	39.47

Barriers to leadership development. Similarly, participants were also asked, "Describe barriers that may have hindered your leadership development." More than half of the participants (57.89%) indicated that they could not name any barriers to their leadership. Consistent with participants' positive conceptualizations of negative life events, challenges are typically viewed as opportunities rather than barriers. Priscilla, who is currently in a graduate program abroad, described how her scholarship application for graduate school was rejected more than a dozen times. However, rather than giving up, she became motivated to work even harder. She said,

> I think that the more I applied (to scholarships) and the more I got rejected, the better trained I will be. So why do I need to be sad? If I'm not successful in something, it just means that I didn't work hard enough, I didn't write good enough, or I just need to work on it more. Next year there will be another opportunity to apply for scholarships, so I can try again next year and prepare for it now. I can easily see my mistakes, I guess, and I'm just chill with it. I don't see that it's the end of the world, that my opportunity is closed forever.

Based on the experience of the participants in this study, barriers and challenges, when viewed rightly, can become prime training ground for leadership skills.

Table 43

Barriers to Leadership Development

Item	Theme	Frequency	Percent	Representative Quote
Describe barriers that may have hindered your leadership development	Unsupportive childhood environment	4	10.53	My surroundings and family didn't really think education is important, and there were no examples in my environment of people that pursued education and was successful.
	Self	4	10.53	I worry too much or I have this fear that I might not be able to do it, to achieve things. Sometimes, I doubt myself.
	Health conditions	2	5.26	Actually, there are many opportunities that I missed mostly due to my health condition.
	Beaurocracy at work	2	5.26	In my office right now, because it is a government institution, there is this bureaucracy that we must follow. We must follow orders from the top to the bottom.
	Absence of formal leadership training	1	2.63	I didn't have that leadership training per se. I guess maybe that's also a barrier. You mentioned about resources, resources to be a good leader…I didn't have all that. I guess the barriers that I think is that… navigating on my own, I'm going to make a lot of mistakes.
	Discrimination	1	2.63	If you may notice, my physical appearance, if I went to public school, I would look very different. Because of my fair skin, because I'm a Chinese descent... Every time I went to public school and every time I assumed the various positions, I would not say that this issue have always been brought up by the people. Could be my fellow, some of my fellow friends or my fellow teachers who have different religion from me.
	None	22	57.89	

Participants mentioned barriers such as an unsupportive childhood environment (10.53%), health conditions (5.26%), and gender/religious discrimination (2.63%). Yanuar, for example, grew up in a community that did not believe he had the potential to succeed. He felt that his potential "was shrunk by the environment…they did not believe I had potential. Even if they did, they would always try to underestimate me." Interestingly, participants also identified their own selves as barriers to their leadership development. They felt that what was stopping

them from being successful was often their own fears or insecurities. For example, speaking about her feelings of inadequacy, Cindy said, “I always feel like I am always lacking something. I'm not sure whether this is a cultural thing or a personality thing, or this is the result of my parents' parenting style.”

Learning how to overcome barriers. Table 44 summarizes how participants learned to overcome barriers. Outside of those who claimed to be self-taught, peers were most frequently named as the ones who taught participants how to overcome barriers. Help in overcoming barriers can be provided directly or indirectly. Direct teaching includes offering advice, lessons from past experiences, or relevant skills. For example, Bella described how she would often discuss her problems with her closest friends and receive helpful perspective and advice from them. Participants who claimed that they were self-taught mentioned reading books and following inspirational social media accounts. Indirect teaching includes observing other individuals who have gone through similar conditions or challenges. In describing how she overcame many barriers to completing her formal education, Sarah said, “I learned from other people’s stories…I learned that there were lots of people who were more deprived than me, and if they managed to overcome their challenges, why should I give up?”

Table 44

Learning how to Overcome Barriers

Item	Theme	Frequency	%	Representative Quote
Who taught you the skills to deal with these challenges?	Self	11	28.95	
	Peers	10	26.32	
	Formal trainers	4	10.53	
	God	2	5.26	
	Family	2	5.26	
	Religious community	1	2.63	
In what ways?	Direct teaching	15	39.47	We shared and talked about the problems or the similar problems that we faced and how to deal with it, how to believe in ourselves more, and what can we do about it.
	Indirect teaching	3	7.89	They didn't teach me, but I saw what they did.

Additional Questions

Towards the end of the interview, participants were asked additional questions relating to their Indonesia Mengajar experience and life and work productivity.

Indonesia Mengajar and Leadership Development

Indonesia Mengajar states that they have three main goals in their mission: stakeholder mobilization, leadership development, and initiation of social movements. IM's second aim, which is the primary focus of this study, is to build "a nation that is filled with leaders with global competence and grass roots understanding" (Indonesia Mengajar, 2015c). During the interview, participants were asked several questions relating to their Indonesia Mengajar experience in order to ascertain its impact on their leadership development.

Reasons for joining Indonesia Mengajar. Table 45 lists participants' reasons for joining Indonesia Mengajar. Half of the participants indicated that they joined Indonesia Mengajar in order to contribute to society. There was a strong sense of giving back and paying forward in the responses given. Several participants mentioned responding to a letter written by Anies Baswedan, founder of Indonesia Mengajar, to contribute to nation-building. Annisa described the contents of the letter in this way:

> There was a letter from Pak Anies. Kind of like a calling letter for the young people to give back to Indonesia. All this time we've been privileged with a good education so it is important… I think that he was calling us to share this privilege to the children in remote areas.

A few participants also mentioned a phrase Baswedan often used, "to educate is the duty of those who have been educated" (*medidik adalah tugas dari orang terdidik*). Participants viewed their

education as a privilege and desired others to experience the same opportunities they had. Rahmat described how higher education was a privilege given to him by others:

> I could go to college not because of my own strength. There were a lot of people that helped me along the way, not in terms of financial support but indirectly. What I had in mind at the time was that I had received a lot during my college time. Now it's time to give back at least one year before I delve into professional work.

Table 45

Reasons for Joining Indonesia Mengajar

Item	Theme	Frequency	%	Representative Quote
Why did you join Indonesia Mengajar?	Contribute to society	19	50	I felt like in college, I haven't really done anything yet. So after graduation, I felt like it was time for me to do something for our country.
	Gain grassroots understanding of Indonesia	8	21.05	I already saw Indonesia from the outside and now I want to see Indonesia from the grassroots level.
	Alternative to professional life	6	15.79	I heard about my friend's experiences about working, it's not really a good experience. Either it is because their bosses or their working environment. So, I had a phobia to go to work. Then, Indonesia Mengajar opened registration. I thought this was a nice alternative.
	Unique learning opportunity (including networking)	6	15.79	I thought that it would be a really, really good experience for me. I will have one year of leadership school and then I can also meet many students and many children in Indonesia outside of my hometown.
	Enjoyed teaching	4	10.53	I always enjoyed sharing knowledge and enjoying the moment when someone that's talking to you have that aha moment. That's very satisfying.
	Followed role model	2	5.26	I had someone that I admired a lot. She is an alumni of Indonesia Mengajar.
	Challenging recruitment process	1	2.63	I also saw it as a challenge since it's very difficult to get accepted. I felt even more challenged by that.

The second most-cited reason was to gain grassroots-level understanding of Indonesia. Many felt that they only knew Indonesia from the perspective of city dwellers and wanted to

know what the conditions in rural and remote parts of Indonesia were like. Rama viewed Indonesia Mengajar as a “scholarship to know your country better”. He added that the experience will allow him “to understand the landscape, to understand the living situation of your brothers and sisters outside of your current location”. Six participants said that they wanted an alternative to professional life – either because they wanted to delay or have been burnt out by work life. Another six saw IM as a valuable learning opportunity, not only in terms of leadership development, but also having access to “the best and brightest” students from across Indonesia.

Influence on leadership development. Participants were then asked how Indonesia Mengajar influenced their leadership. More than half of participants (57.89%) mentioned learning practical leadership skills related to communication, listening, networking, and collaboration. Robby described his learning experience in the following way:

> I learned how to work with different types of people. I got to work with people who didn’t know how to surf the web. I got to work with people who couldn’t even count but they had to be a mathematics teacher. There was one teacher that did not know how to compose a complete sentence, but they needed to teach third grade. It was very difficult. Most of the teachers in my village were basically elementary school graduates.

Participants reported gaining skills from the various tasks and challenges they were presented with every day during their deployment. More specifically, eight participants mentioned having increased resiliency and adaptability as a result of those challenges. William aptly summarized his experience by stating that, “leadership comes when we have to face challenges”.

Table 46

Influence of Indonesia Mengajar on Leadership Development

Item	Theme	Frequency	%	Representative Quote
Tell me about your experience	Learned practical leadership skills	22	57.89	I learned how to build positive relationships with others, maintain good relationships with

as a young teacher (pengajar muda). How did it influence your leadership?				others like the government officials, the teachers, the local people.
	Increased adaptability and resilience	8	21.05	I was deployed in a village that was really basic. We had to shower outdoors, there were no toilets, there was no privacy. I used to be someone who needed a lot of privacy. But during that experience, I did not have any privacy, I was forced to adapt, to be resilient, and also to raise my tenacity.
	Redefined meaning of leadership	5	13.16	Leadership is not about a title…it's really about influencing or convincing people to move towards the direction that we want them to, because we feel that will better their lives.
	Awareness of areas for improvement	3	7.89	The twelve leadership competencies revealed the skills that I needed to work on.
	Increased self-confidence	2	5.26	I feel more confident now. When I meet new people, I love to discuss about things. Maybe like social projects, or something new, new ideas that come to my mind.
	Humbling experience	2	5.26	When you're there in the village, and then there are teachers there who have been teaching for like 10, 20, 30 years with so little pay, but still doing it every day, and not knowing when they're going to stop. Us, we know that there is a finish line. They didn't. It just put things in perspective, and it just makes you realize that you're nothing, that you have done nothing.
	Increased love for Indonesia	1	2.63	Indonesia Mengajar rekindled my passion to help people…and my love for the country, and then makes me realize I do want to do something for Indonesia.

Five participants also emphasized that their deployment redefined their definition of leadership. Yanuar described the shift in his perspective this way:

> I previously thought that a leader is someone who can manage people or someone who can maintain hundreds or even thousands of teams and become successful and everything. I think now, leadership for me, it's not about quantity but it's also about quality. How you see people - even though there may only be one or two. If you help them, you are a leader. Even if you are only doing a small thing for them. For example, teaching them how to write, or teaching them how to count - one, two, three, four.

Participants expressed that their deployment experience led them to a broader definition of leadership. Many mentioned that leadership was primarily about influence rather than titles or formal positions. As such, leadership can happen both on a large scale or small scale, formally or informally.

Most influential person. Participants were asked to name the most influential person during their deployment and explain why. More than half mentioned being most influenced by other young teachers in their batch. The remaining said they were most influenced by local community members or by IM personnel, which includes trainers, staff, and founders.

Table 47

Most Influential Person During Indonesia Mengajar Deployment

Item	Theme	Frequency	%	Representative Quote
Who influenced you the most?	Other Young Teachers	20	52.63	
	Local community members	13	34.21	
	IM personnel	8	21.05	
And why?	Served as inspiring and exemplary figures	19	50	My host mother.. I have a lot of respect for her. What influenced me a lot was her learning motivation, basically. She could not read properly. She can be defined as illiterate. She only went to school until second grade and after that, she needed to care to her sister, so she had to skip school. Every night, she tried to read the Bible out loud and sometimes, like twice in a week, I taught her how to read in complete sentence. Now she can read fluently.
	Gained knowledge and skills	14	36.84	I learned a lot from them in terms of technical skills and in term of how to teach in classroom, but also how to interact with other people, how to navigate the social relationships with other stakeholders but also among ourselves.
	Received feedback and encouragement	11	28.95	They gave me suggestions, gave me criticism, and gave me support: what I should do, what I can do better to make progress in terms of the education activities in my village.

Half of the participants explained that the most influential people during their deployment had inspiring characteristics or behavior. Musa, for instance, described how his host father, one

of the few educated people in the village, was an "open-minded person who sees education as an important thing". He continues by saying that,

> He (host father) gave me spirit to teach every day in elementary school. He also gave me everything for free. I stayed at his house for one year, everything was free. From the food, everything. Water, drinks and electricity. He facilitated me a lot. He was not a leader formally in the village, but he was an inspiration that helped me survive in that village.

Similarly, Rama described how his illiterate host mother dedicated her nights to learning how to read from him until she could successfully do so.

Fourteen mentioned learning practical knowledge and skills from their most influential person/people. Annisa described how she learned different things from different people,

> For example, from X, I learned about how to convey your ideas, how to influence other people with your ideas. I also learned from X, our tutor, about teaching methods, like how to intrigue the children's interest and curiosity so that they develop lifelong learning behaviors rather than just giving them what they need to know. Yes, a lot of things that I picked up from all the different people.

Finally, 28.95% reported receiving direct feedback and encouragement from their most influential person/people.

Lessons learned. Participants were asked to name the top three things that they learned during their IM deployment. Table 48 summarizes their responses based on the Leadership Competencies list provided by IM to the young teacher candidates. Cumulatively, the top three lessons learned were related to tenacity and adaptability (65.79%), positive working relationships (47.37%), and the realities of the Indonesian education system (28.95%). More than any other

lesson, participants said that their deployment experience increased their tenacity and "hardiness in life". Their one-year deployment was filled with many challenges – sometimes daily – that taught them about the importance of perseverance, resilience, and adaptability. Brenda described the most important lesson she learned in this way:

> Resilience. First one is resilience. I was deployed in Aceh. I came with a lot of ideas. I thought that since I was there in the fourth year of the program, people will accept us better than those in the first batch, but it turns out it wasn't like that. You have to keep on trying. You have your own program. You try A, it's not working. Then you have to still keep on trying to B. Number one, I really learned about resilience.

Table 48

Lessons Learned During Indonesia Mengajar Deployment

Item	Theme	Frequency	%	Representative Quote
What three things did you learn?	Tenacity & adaptability[a]	25	65.79	I can withstand any kind of challenge in the village.
	Positive working relationships	18	47.37	I learned about building a positive relationship with people. At first, I really like to avoid conflict, which later I learned that it's not really good to always avoid conflict. The most important thing is you have a positive relationship with your people.
	Indonesian education system[b]	7	28.95	We thought that the kids there had the same right as us in having education, but they weren't lucky enough and they didn't have the access for proper education.
	Continuous learning	6	15.79	Actually, after Indonesia Mengajar, I knew that I don't want to build my career in the in same field as my studies. So then after that, I went to another school. Now I get a proper and enjoyable career that I want to be in.
	Initiating action	5	13.16	As a leader, if you don't take any initiative, you won't go anywhere....You have to be the one who gets the ball rolling.
	Work standards	4	10.53	I learned a lot from them in terms of technical skills and in terms of how to teach in classroom, but also how to interact with other people, how to navigate the social relationships with other stakeholders but also among ourselves.
	Impact	4	10.53	I learned that you can make an impact wherever you are.

	Planning and organizing	3	7.89	The last one-- I think it's important to set a rational goal. It's not rational for me to try to change the whole village in just one year over time. I tried to set something that I can do and I can measure and that the person next to me, teaching after me can continue that and see the change in the long run.
	Communication	3	7.89	I learned that we were nothing, even though we thought that we've got knowledge, no matter what level we were in or what status, it was nothing if we couldn't communicate with the people there.
	Coaching	3	7.89	I think IM does not teach people to be teachers, but taught people to be leaders.
	Facilitating	3	7.89	Managing self, managing work, managing team.
	Analytical thinking	2	5.26	I think I learned a lot about perseverance, also to not be afraid of making an initiative, like to just try it, and also to be creative.

Notes. [a]Tenacity and adaptability were listed as separate competencies in the original list by IM, but due to significant overlap, it was combined in the final analysis. [b]Knowledge about the Indonesian education system was not part of the original list, but was added in the analysis since it was mentioned by several participants

Secondly, participants learned the importance of collaboration and maintaining good relationships with all stakeholders involved. Highlighting the importance of collaboration, Annisa said, "You can achieve good things by yourself but if you work with other people you can achieve bigger and greater things. It's very important to involve people since the beginning." Amanda described this skill as learning how to "view other people's currency".

Third, participants reported learning about the true conditions of education in Indonesia, particularly in rural and remote areas. Robby described the lesson as "witnessing the dilapidation of the education system in Indonesia". This includes "the curriculum, the bureaucracy, the ignorance of the parents to the basic education of their children because they think it is the task of the country, the task of the school to educate their children." Participants described being alarmed at educational conditions in the communities, especially the gap between conditions in the big cities and rural/remote areas.

Leadership and Career Questions

Towards the end of the interview, participants were asked additional questions relating to their perceptions of leadership and their career trajectories.

Definition of a successful leader. Table 49 summarizes participants' definition of a successful leader. In general, leadership was seen as being about influence – influencing the others, self, and community/world. Hence, participants' responses were grouped based on whether they were *task-oriented*, *others-oriented*, or *self-oriented*. Several participants gave more than one answer. The majority (78.95%) defined a successful leader with *others-oriented* responses. This included influencing others, exercising understanding and empathy towards others, collaborating with others, and reproducing other leaders. Participants alluded to successful leaders being selfless, able to empathize, and willing to prioritize others above themselves. Michelle, for example, defines a leader in this way:

> She is not selfish. She doesn't think about her own success, but she thinks about the success of the people whom she works with and care beyond their professional relationship. She cares beyond the professional life and really understands the people that she works with as her partners whatever their position may be.

In a similar vein, Alana said, that a successful leader is one who is able to "understand how others work and figure out how we can work together." Additionally, as Amanda noted, "A successful leader is one who could create other leaders." Successful leaders are interested not just in their own development but in the development and well-being of those they lead.

Table 49

Definition of a Successful Leader

Item	Theme	Frequency	%	Representative Quote
How would you define a	Others-oriented	30	78.95	A good leader is someone who not only develops themselves, but also develop others as well.

successful leader?	Task-oriented	10	26.32	They could drive a change, bring up solutions. Their actions are louder than their words.
	Self-oriented	4	10.53	I define successful leaders from their impact, no doubt. But the basic thing, in my opinion, is that they have to know themselves. They know themselves along with their ambitions and they know how to control it all.

Ten participants gave more *task-oriented* answers. Task-oriented responses include the ability to attain goals and impact the surroundings positively. There is an emphasis on goal attainment rather than on interpersonal relationships. For example, Anna said, "I think a leader is successful if he can rally the people to do what he or she wants them to do." Additionally, leaders should also be able to drive change and generate solutions to problems. Finally, 10.53% gave responses that were *self-oriented*. For example, Amanda said that successful leaders are those who "know themselves". Successful leaders are reflective, intentional, humble, and aware of their strengths and weaknesses. Robby, for example, highlights the importance of being an individual who exercises optimism and gratefulness at all times:

> I consider myself successful when I can be grateful... whether something was a bad or a good decision, whether it's an advantage or disadvantage, I can still be grateful and think positively and move on and move forward because as a leader we have to make a lot of decisions. Even with a bad decision, we can still be grateful and learn from that mistake…Gratefulness is the indicator that someone has the capability to grow as a leader.

Three participants also made the distinction between leaders and bosses. In explaining the difference between a leader and a boss, Muthia said, "Bosses would just say, 'You do this, and that. That's your job,' but leaders should try to understand what other people think on a deeper level. The leaders will know what kind of opportunities to give to people from there." Similarly, Dinda asserts that the quality of interpersonal relationships distinguishes a leader from

a boss. He said, “It's really important to know people personally, not just knowing the people who work under you by name. You have to know them personally, so that they don't see you as a boss, but a leader.”

Greatest resource. Participants were asked to name their greatest resource (see Table 50). The majority of participants named people as their greatest resource. The most cited response was *family*, particularly parents. Aulia, for example, said,

> I think my family is the most important resource because my mother, although she was not a well-educated person, she was able to educate us, her children in a good way about how to fight our problems in life, how to be independent, how to be smart. I think I'm very happy that I came from such a family.

Another 31.58% named *people* in general as the greatest resource. Highlighting the important influence various people made in his life, Alana said, that people “introduced me to the world and gave me the perspective of the world. Sometimes, when I don't know something, they introduce me to a new thing and then in that way, I can learn something new.” Eleven participants pointed to their own *internal drive* and *mindset* as their greatest resource. This includes having strong motivation and determination, growth mindset, and high levels of confidence.

Table 50

Greatest Resource

Item	**Theme**	**Frequency**	**Percent**	**Representative Quote**
What is your greatest resource?	Family	14	36.84	I think about my parents because they are the ones who made the biggest impact on me, who affected me the most and helped me to become successful right now.
	People (incl. friends)	12	31.58	People that I have regarded as resources, and they would be able to point me to other resources.
	Internal drive and mindset	11	28.95	I think that compared to my other siblings, I realized that what differentiates me from them was the motivation. I think the

				understanding that we should not only think about ourselves but always think larger. Each of us has a purpose in life and we have to find that purpose.
	Faith and religion	5	13.16	I think religion or faith is my greatest and most valuable resource.
	Books	4	10.53	Books. I have a lot of books at home- about human and personal development. Currently, I'm reading Grit by Angela Duckworth.
	Skills and abilities	2	5.26	Yes, it's my talent, I think God has given me the skills that I have to dig from within me.
	Past experience	2	5.26	Things that I learned, things that I experienced, my knowledge, what I understood about things. Those experiences were then what helped me to overcome things.

Current job description. Participants were asked to describe their current occupation, including how long they have been in the field. Thirty of the participants are currently employed. Sixteen are currently working for for-profit companies/organizations (e.g., consulting firms, accounting firms, private schools), while fourteen are currently working at non-profit companies/organizations (e.g., policy/research think tanks, humanitarian organizations, non-governmental organizations). Six are currently in graduate school overseas (i.e., master's and doctoral degrees), while two are job seekers since they just recently returned from their IM deployment. Among those who have formal job positions, 43.33% hold managerial roles (i.e., formally supervising others), while 56.67% hold non-managerial roles (i.e., not formally supervising others). About two thirds of participants reported being in their current field for less than two years.

Table 51

Current job description

Item	Theme	Frequency	%	Representative quote
What is your current job title?	For-profit company/organization	16	42.11	
	Non-profit company/organization	14	36.84	
	Graduate student	6	15.79	
	Job seeker	2	5.26	

How long have you been in this field?	Less than one year	14	36.84	
	1-2 years	12	31.58	
	2 years or more	10	26.32	
	N/A (e.g. job seeker)	2	5.26	
How do you exercise leadership in your current position?	Collaborating with stakeholders	14	36.84	I deal with a lot of people from very diverse backgrounds… because here like, we have very diverse layers. How do I cooperate with them? How do I join them to reach the vision?
	Supervising and providing feedback	11	28.95	I am responsible for coordinating all the teaching staff…I coordinate them, I supervise them, and I give mentorship, and if they have any problems or any challenges that they are facing in the field, especially in terms of teaching and training their students.
	Influencing and empowering others	9	23.68	I make sure that I hire other leaders.
	Exercising self-management	5	13.16	I think it's more how I manage myself most of the time because as a student, my biggest challenge is managing my assignments…manage my time. Leadership, for now, it's only about managing myself.

Participants were also asked to describe how they exercise leadership in their current positions. Others mentioned that they exercise leadership through collaborating with various stakeholders (36.84%) or supervising others (28.95%), including providing mentorship, feedback, and training. Several said they exercise their leadership by influencing and empowering others to become leaders. Anna, for example, described how she trains her staff to become leaders through problem-solving. She said,

> I make sure that I empower them to be a leader, from the smallest thing. I will never answer a question from my team member. For example, if someone asked me, "Hey, I have this problem. What do you think?" I will never answer that. I will ask back, "What do you think? What's your recommendation? Why do you think so?"

It is interesting to note that even those in non-managerial positions believed that they can exercise their leadership and influence in non-formal ways. For five participants, leadership

currently means managing themselves to be disciplined with their time and completing projects/assignments in a timely manner.

Future career. Participants were asked about their future career plans. Eleven participants indicated that they had plans to go to graduate school overseas and several were in the midst of applying for scholarships. Five would like to have an education-related career, while another five wanted to focus on raising and supporting a family. Other fields' participants expressed interest in included politics/diplomacy, social entrepreneurship, and humanitarian work.

Table 52

Future Job Description

Item	**Theme**	**Frequency**	**%**
What is next for you in your career?	Graduate school	11	28.95
	Education-related career	5	13.16
	Raising and supporting family	5	13.16
	Political or diplomatic career	4	10.53
	Social entrepreneur	4	10.53
	New job	3	7.89
	Humanitarian career	2	5.26
	Promotion at work	2	5.26
	No plans	2	5.26

Advice for aspiring leaders. The interview concluded by asking participants to give their best piece of advice for aspiring leaders. Participants' responses were categorized based on the Leadership Competencies list provided by IM. Ten participants highlighted the importance of continuous learning. For instance, David said,

> Leadership is always changing. The method for leaders to lead others will always change from one generation to another generation. We cannot use methods that were used one or two decades ago. They might not be suitable. So, we have to learn, and we have to improve our skills and understand about the changes in our society in order to be a good leader. Never stop for learning.

Anna referred to this desire to continuously learn and improve as “staying hungry” (see Table 53).

Table 53

Advice for Aspiring Leaders

Theme	Frequency	%	Representative Quote
Continue to learn	10	26.32	Stay hungry, because if you are hungry, then you know that you always want to improve yourself, you always want to improve your work, you always want to find a way to create the great impact, you always want to find a way to be a better leader for your team, create a strong team lead. There is endless of possibilities of you becoming a better and better leader every day when you are hungry.
Know yourself first	10	26.32	They should find their own selves before they lead others. I think they should know about what they want in life, what their strengths are.
Collaborate with others	7	18.42	A good leader will never walk alone. A good leader will never compete with anyone, but he has to collaborate with other people even when it's a competitor.
Never give up	6	15.79	Never stop questioning your purpose in life and always have the energy to pursue it.
Make an impact	5	13.16	Focus more on what you want to do and what impact you want to make rather than the title.
Use a bottom-up approach	2	5.26	Switch your mindset to see from bottom-up in everything. Leaders need to change their perspectives. Decision-making needs to happen from the bottom-up.
Maintain integrity	2	5.26	One of the most important values that a leader must have is integrity. Integrity is important for the future leader. For me, the right term to describe integrity is, “Walk the Talk”. It means you do what you say & what you believe.
Find mentors	1	2.63	You know what I wish I had when I was going through all this, is actually a mentor, someone who can actually teach me and show me the ropes and people always say this, and I've been influenced by this.

Another ten participants highlighted the need for leaders to know themselves first before leading others. Rama quoted the founder of his company who said,

> Don't be like me, don't be like people who are very successful. Not everyone is destined to Jack Mah or Jokowi. But everyone is destined to be yourself. Every one of us has a role and you don’t need to mimic someone else. We can take inspiration but don't just copy blindly. Don't just mimic without knowing the objective or knowing the reasoning.

Seven participants mentioned the importance of having strong interpersonal skills and the ability to collaborate with others. Henry, for example, said that "as leaders, we cannot position ourselves as the one who leads alone." On the other hand, leaders are those who encourage, understand, listen, and support others. In doing so, common goals and objectives can be achieved more easily.

Summary of Findings

The following section combines the qualitative and quantitative data and discusses the key findings for each PGM factor.

Key Findings for Individual Aptitude Factors

Development. Participants reported that the seeds of leadership were most frequently discovered by their peers and teachers. Since having the best grades gave children the best chance of getting into the top universities, parents were typically more concerned with their children's academic performance. As several participants have mentioned, parents did not typically view leadership as a goal to be pursued. Peers, however, seem to be more oblivious towards grades and more prone to encouraging non-academic achievements. For example, it was not uncommon for peers to nominate the participants for leadership positions in sports, arts, or academics. Additionally, participants encountered teachers who encouraged them to excel beyond academics and opened up opportunities for them to participate in competitions, presentations, and study abroad programs. Acknowledgment from peers and teachers had a double positive impact on participants. Firstly, the acknowledgment boosted many of the participants' confidence and self-esteem. Secondly, the acknowledgment opened up doors of opportunities not available to others that led to the development and refinement of their leadership skills.

Nearly half of the participants discovered their leadership potential during their elementary school years. Schools played an important role in leader development by providing various opportunities for the seeds of leadership to take root and grow. Leadership cultivation in the early years typically took place indirectly through participation in school-based clubs, organizations, and other class projects. Participants often took on leadership positions either voluntarily or by appointment. They noted how these opportunities helped them to develop valuable skills such as communication, collaboration, discipline, time management, and perseverance in the midst of challenges. Since leadership was typically not an outcome that was intentionally pursued in the early years, time spent in leader development was also found to increase with age (refer to Table 11).

Ability. Half of the participants indicated that as children, they demonstrated high academic ability, including having a good memory. Furthermore, survey data showed that more than half were identified as being gifted during their elementary school years (refer to Table 5). Half the participants also indicated that they received academic awards/scholarships and was selected for accelerated academic programs/fellowships. This demonstration of early ability is consistent with other studies on talented individuals (Paik, Choe, Otto, & Rahman, 2018; Paik, Gozali, & Marshall-Harper, 2019; Paik, Marshall-Harper, Gozali, & Johnson, 2020). Interestingly, however, when asked to describe themselves as students, only eight described themselves as being *intelligent*, an ability-based description. In contrast, the most common word groups mentioned were effort-oriented words – *diligent*, *a passionate learner*, and *active*. Several participants explicitly mentioned that they were not the smartest in their family or at school. But what they lacked in natural ability, they made up for with effort and hard work, as demonstrated in PGM. In fact, participants believed that effort is more important than ability.

Ability was viewed as something that can be acquired through effort. On the other hand, ability had minimal value and impact apart from effort and hard work (Paik et al, 2019).

Motivation. Parents were an important source of motivation in participants' early years. As children, participants were more motivated by the desire to please their parents and not let their sacrifices go to waste. Those who mentioned being driven by an internal desire to be successful pointed to their parents' influence in terms of setting high expectations for their futures and valuing high achievement. As Ryan and Deci (2000) points out, extrinsic motivation can have the same positive influence as intrinsic motivation once the individual internalizes the values of the goals themselves. In other words, although parents may be the ones to encourage high achievement in the early years, participants eventually believed in the value of those goals and integrated them into their own belief systems. As adults, the majority of participants became driven by the desire to make a positive impact to their surroundings. Participants' experiences with Indonesia Mengajar were likely to have emboldened their desire and confidence to make a difference in the lives of others.

Key Findings for Instructional Factors

Learning climates. In general, school was enjoyable because it provided participants with the opportunity to socialize. Formal classes were typically described as being boring and irrelevant. Extracurricular activities, on the other hand, provided much-needed fun and valuable learning. Hence, it was not surprising that most participants identified the large variety of extracurricular clubs and activities at their schools as its most supportive feature. Through these clubs and organizations, participants learned leadership-related skills and had access to even more opportunities locally and abroad (i.e., competitions, exchange programs, etc.). These

opportunities opened up participants' perspectives and gave them access to a wider network of experts and resources, which then influenced their subsequent behaviors, ambitions, and goals.

Those who attended top-ranking schools mentioned that their schools set high expectations for all their students. Students were expected to excel in national examinations, competitions, and tournaments and also gain admission to top-ranking high schools and universities. Such school-wide expectations enhanced the positive impact of peer influence as students work towards similar academic goals. Several participants alluded to how their schools hand-picked them to achieve specific objectives, such as winning national competitions or entering into a top-ranking secondary school. While these expectations may become a heavy burden at times, participants generally lived up to or came close to the expectations set for them. High expectations encouraged participants to aim higher, even more than what they believe they were capable of at the time (Paik et al., 2019). Additionally, being given high expectations also boosted their self-esteem and confidence, which influenced their subsequent achievement behavior.

Quality of instruction. As shown in the quantitative data, approximately half of the participants attended top-ranking elementary schools and more than three-quarters of participants attended top-ranking secondary schools (refer to Table 5). Interestingly, only one participant attended an Islamic elementary school. The rest of the participants attended public or private general elementary schools under the direction of the Ministry of Education and Culture (MOEC). Nonetheless, many of the participants who attended top-ranked schools indicated that they enjoyed the social aspects of school more than its curricular aspects. Many mentioned that they learned more outside the classroom, through participation in various clubs and activities, rather than inside the classroom.

In addition to having better facilities and larger varieties of extracurricular opportunities, top-ranking schools are typically described as having high-quality teachers. In addition to being a dynamic source of knowledge and information in the classroom, these teachers also valued and encouraged participants' development outside the classroom. These teachers supported students' non-academic pursuits, helped nurture students' non-academic skills, and perhaps most importantly, believed in the students' potential to achieve great things. In the absence of parents, teachers also became surrogate parents who provided valuable guidance and nurturing for their students.

Quantity of instruction. As previously mentioned, participants typically did not pursue leadership intentionally. Leadership was a bonus or side effect rather than the main goal. Not surprisingly, as indicated in the survey results, the amount of time participants spent developing their leadership tend to increase with time (refer to Table 11). During the early years, participants did not spend much time actively developing their leadership. However, they were involved in activities that indirectly and unknowingly helped to develop their leadership abilities. A few participants mentioned participating in formal leadership training programs in their later school years (i.e., university or graduate school). Nonetheless, participants continued to experience more informal and indirect leadership instruction throughout their adult years.

Interestingly, when asked about how long it took them to feel like an established leader, the majority said less than ten years. This contradicts a well-established finding in talent development research – that it takes approximately ten thousand hours or ten years to become an expert in a field (Ericsson et al., 1993). One reason for this discrepancy might be the elusive nature of leadership. Achievement in sports or arts, for instance, can be measured concretely and objectively (for the most part). Eminent athletes are ranked nationally and internationally, while

the work of eminent artists reach millions of dollars. Success in leadership, on the other hand, varies by time, age, discipline, context, and organization. Furthermore, the start of leadership development is not always clear. Participants in this study might have used different criteria to mark the start of their leadership instruction. For instance, for some, leadership instruction began when they were assigned a leadership role at school (e.g., class leader), for others it might have been when they began to intentionally develop their leadership skills. Hence, responses given for the question above may not accurately reflect the quantity of leadership instruction and training participants received. Finally, due to their relatively young age, their responses now and later after having become even more established leaders may differ.

Key Findings for Environmental Factors

Home environment. Participants came from a wide variety of backgrounds and upbringings. Although the majority grew up in two-parent households, several experienced a parents' death or divorce. Some parents were happily married, but others had strained marriages marked with tension and hostility. Some grew up in relative ease and comfort, while others faced financial or health constraints. Some households were incredibly strict, while others were relaxed and afforded children plenty of freedom. Despite the variations in parenting styles and practices, participants' families passed on similar values, implicitly or explicitly, to their children. These include serving others, having a good work ethic, keeping religious practices, and the importance of education. Interestingly, participants also indicated that while growing up, their families were involved in religious practices to some extent (refer to Table 7). Adherance to religious practices was likely to influence the impartation of other values such as service, generosity, helpfulness, honesty, and integrity. In most cases, participants witnessed how their parents modeled these beliefs through their own behavior and actions. These values became an

underlying force behind participants' motivation, worldview, and behavior from elementary school through adulthood.

In addition to providing values to live by, parents were influential in providing access to opportunities that enhanced leadership development. For instance, parents often enrolled their children in courses outside of school and introduced children to teachers or coaches who could help develop specific talent areas. Many parents went out of their way – physically and financially – to get their children into the best schools and courses. Contrary to popular belief, most of the participants did not have overinvolved or controlling parents. Instead, most had parents who gave them the freedom to make their own choices (e.g., choice of major or school). The current data shows that the majority of mothers were authoritative – providing freedom within limits – and were typically more involved than fathers in the upbringing of their children. This freedom helped to forge a strong sense of identity, direction, intrinsic motivation, and responsibility early on. The current data demonstrates that parents generally influenced leadership development indirectly but also significantly.

Peers. Participants generally had positive interactions with peers. Participants reported spending more time with peers during their undergraduate years than their elementary years. At the same time, they spent less time with their family during their undergraduate years compared to their elementary years. Several participants mentioned that their peers were the first ones to identify and encourage their leadership potential. Peers also provided much-needed affirmation and support for participants to take on leadership roles. Some participants noted how their peers believed in them, even though they did not believe in themselves. In the absence of formal mentoring or leadership development programs, high-achieving peers occasionally became mentors and role models.

Those who attended top-ranking schools noted how being surrounded by other high-achieving students motivated them to work hard and keep up with their peers. Several participants mentioned how comparing themselves to their more studious peers made them want to study harder themselves. Others looked to peers from less advantaged backgrounds as a source of inspiration and reminder to persevere during challenging times. Perhaps most importantly, peers, including friends made during the Indonesia Mengajar deployment, became an important source of information. Participants gained knowledge about scholarships and job opportunities through their peers. Hence, in this way, peers become an important form of social capital.

Mentoring. Not all participants had mentors, but everyone agreed that they are important and necessary. Mentors mainly influenced participants' leadership development by providing support (emotional, psychological, and technical) and guidance. Mentors – specifically, their commitment to the mentee – often determine the mentee's academic and professional trajectory. Mentors often act as gatekeepers who introduce mentees to opportunities and other influential people in the field. Furthermore, mentors are typically the ones writing recommendation letters for scholarships or other opportunities, and hence their dedication and willingness to support the mentee is of utmost importance. Nonetheless, only one-fifth of the participants had access to mentors through formal leadership programs. The remaining had mentors who were peers, parents, teachers, or supervisors at work.

Participants were asked to name three traits they would look for in a mentee because the answer to those questions typically reflect what participants believe to be important traits for success. Participants named the *willingness to learn* and having a *strong goal-orientation* to be more important than having natural abilities. In other words, they believed that having the right

attitude and mindset is more important than having the right set of skills or talent. This finding may reflect an underlying belief in the role of effort over ability when it comes to success and achievement.

Extracurricular time. The top three after-school activities during elementary and secondary school were participating in organized activities, socializing with friends, and reading. It is interesting to note that all but one participant mentioned enjoying reading or reading voraciously while growing up (Paik et al., 2019, 2020). As shown in the survey findings, participants grew up with a lot of access to books and other reading materials (refer to Table 8). Books were viewed as an important source of information, an avenue for gaining new perspectives, and for some, an escape from an unpleasant reality. Nonetheless, with the introduction of technology and social media, participants acknowledged that they read less now than when they were children. Growing up, reading books used to one of the few leisure activities available in the home. As adults, participants have more entertainment options to choose from (e.g., social media, websites, etc.) and as a result, reading time decreases.

Cultural distinctions were also found in the way participants used their extracurricular time. Unlike in the United States, where it is common for adolescents to have jobs, participants in the current study indicated that they did not work during elementary/secondary school. Rather, their primary role growing up was to study and succeed as a student. Additionally, while involvement in the arts and sports is a popular extracurricular activity in the United States, only very few participants in this study did so regularly. Participants in the study also spent around two to three hours daily with their families during their elementary and secondary school years. As previous research has shown, time spent with family is a developmental asset that contributes to children's well-being and development (Hofferth & Sandberg, 2001).

Key Findings for Contextual Factors

Participants faced a combination of positive and negative historical, political, and personal life events. What is most interesting to note is their perception and evaluation of those events. Those who experienced negative life events were able to view them in a positive light. Those who experienced challenges were able to view them as opportunities to grow. Instead of being discouraged by setbacks or failures, they were able to remain optimistic, learn from the event, and work harder towards their goals. They did not allow their circumstances to become an excuse for underachievement. Rather, they used difficult circumstances to learn to be more independent, resourceful, and resilient. Kula (2013) found similar patterns in high-achieving Latino youth. She wrote,

> Participants did experience both institutional and societal barriers, but overcame these by using barriers as motivation to seek whatever resources or help they could find and work harder to achieve their goals. This transformation of a negative influence into a positive one was made possible in large part by their motivation, "grit", and dedication to serve their families and communities.

As previously mentioned, *grit* is been defined as "passion and perseverance for long-term and meaningful goals" (Duckworth et al., 2007). Gritty individuals are those who know their purpose, defined as "the intention to contribute to the well-being of others" (p. 146). They know that what they do matters to others. This knowledge is what fuels them to persevere and move forward in the face of setbacks and challenges. Indeed, participants' reasons for persevering in achieving their goals – whether to repay their parents' sacrifice or to give back to their communities – played an important role in helping them overcome difficult life circumstances.

The role of challenges in shaping leaders cannot be understated. Other studies on eminent individuals have found similar patterns of resilience and perseverance in the face of great obstacles. Paik et al. (2019) noted how the eminent individuals they studied demonstrated *focused motivation* – "undeterred, intentional perseverance with an end goal or product in mind" (Paik, 2013, p. 106). One participant pointed out the necessity of negative life events by stating, "leadership is a function of adversity". In other words, a leaders' effectiveness is proportional to the amount of challenges or difficulties he/she has faced.

Key Findings for the Impact of Indonesia Mengajar on Leadership

One of the underlying objectives of this study was to also examine why high-achieving young adults with excellent job prospects in big cities choose to live in remote and under-developed villages (sometimes, with no running water, electricity, or cell phone signal) on their own and for very little pay. How are such leaders – who not only have big *minds*, but also big *hearts* – developed? In the developed world (and increasingly in developing countries), we often hear the phrase "education is a right". Education, especially high-quality education, indeed should be the right of every child in this world. However, what became apparent through the interviews with participants was that they did not view their education as a right, but rather, as a privilege. Viewing education as a right may create a sense of entitlement in individuals. In contrast, when education is a privilege, it is treated as a gift. It is out of this position of gratefulness for having received educational opportunities that many other Indonesians do not have (i.e., attending university) that participants developed a strong desire to give back to their nation. They wanted the younger generations to have the same opportunities that they had. Additionally, participants also acknowledged that they did not succeed on their own, but

received assistance – financial, emotional, psychological – from numerous people along the way. Hence, they also wanted to become that support person to future generations.

Undoubtedly, Indonesia Mengajar influenced participants' leadership development in many and significant ways. Based on participants' responses, the one-year deployment fulfills IM's second aim to build "a nation that is filled with leaders with global competence and grass roots understanding" (Indonesia Mengajar, 2015c). Participants emerged with the global competence needed for 21st century leadership positions – tenacity, adaptability, and the ability foster positive working relationships – and grassroots understanding - first-hand knowledge of life and educational challenges in remote parts of Indonesia. While several participants admitted that the transition back into real life post-deployment have been very challenging and not always positive, most felt that IM changed their life trajectory and mission for the better. In terms of leadership development, IM provided a unique learning experience that could not be gained through books, podcasts, courses, or leadership training programs.

CHAPTER 5: CONCLUSION AND IMPLICATIONS

The purpose of this study was to examine how individual aptitude, instructional, and environmental factors in the early to later years influenced the development of young leaders in Indonesia. Participants' narratives and survey responses highlighted that *alterable factors* (e.g., parenting practices, teacher quality, schooling experiences) were influential in their leader development. This finding echoes previous and more recent research that highlight the role of supportive conditions and environments in talent development (Bloom, 1985; Csikszentmihalyi et al., 1993; Paik et al., 2019). Bloom (1985), for instance, asserted that:

> Exceptional levels of talent development require certain types of environmental support, special experiences, excellent teaching, and appropriate motivational encouragement at each stage of development. No matter what the quality of initial gifts, each of the individuals we have studied went through many years of special development under the care of attentive parents and the tutelage and supervision of a remarkable series of teachers and coaches. All the talented individuals we interviewed invested considerable practice and training time, which rivaled the time devoted to school or any other activity. (p. 543)

Creating supportive conditions for leader development cannot be done by the individual alone. It requires the collaboration of multiple stakeholders and various levels. Hence, this chapter focuses on highlighting key implications for practitioners (e.g., parents, educators, and policymakers) in developing the next generation of leaders in Indonesia. A brief discussion of the key findings on leader development will first be presented. A section presenting implications for practitioners and policymakers will then follow. The chapter concludes with implications for future research.

Discussion of Key Findings

This section will highlight and discuss key findings pertaining to leader development. These findings serve as the basis for the implications and recommendations for practitioners provided in the following section.

Leaders are Born AND Made

Responding to the question of whether leaders are born or made, John Gardner (1990) has famously said, "Most of what leaders have that enables them to lead is learned. Leadership is not a mysterious activity…And the capacity to perform those tasks is widely distributed in the population" (J. Gardner, 1990, p. xv). Kouzes and Posner (2016) similarly assert that "leadership is not a talent that you have or you don't. In fact, it is not *a talent*, but an observable, learnable set of *skills* and *abilities*. Leadership is distributed in the population like any other set of skills" (p. 5). In other words, leaders are born, just as every person in this world is born. Furthermore, leaders are made, just as every doctor, engineer, artist, dancer, teacher, and scientist is made. Participants in this study, for example, represent a wide range of backgrounds, abilities, interests, and personalities. Yet, all of them display high levels of leader-related skills cultivated through a combination of leading and learning.

Leader development, therefore, is consistent with the "mastery model" of talent development – whereby skills and abilities can be learned and cultivated (Matthews & Foster, 2006; Paik et al, 2019). Highlighting the role of cultivation, leadership researcher Bruce Avolio (2004) noted, "Even if you are predisposed to be a leader by some favorable combination of genetics, you are not preordained, and learning and leading must go hand in hand for anyone to achieve his or her full leadership potential" (p. 3). Findings from this study demonstrates that

everyone has the potential for leader development. Unfortunately, not everyone experiences the necessary opportunities, support, and resources needed to succeed (Paik & Walberg, 2007).

Leader Development is Talent Development

As previously mentioned, researchers have more recently made a distinction between leadership development and leader development. While leadership development emphasizes the development of a group of individuals and their interpersonal capacities, the focus on leader development is on individual leaders and their intrapersonal capacities (Day, 2001). In other words, leadership development focuses on developing the qualities of an organization, while leader development focus on developing the qualities of individuals (O'Toole, 2001). The qualities that make a good leader are the same characteristics needed to succeed in life. Good leaders are typically described as those who are visionary, empathic, resilient, confident, collaborative, and have good communication skills.

Leaders also inspire others not just by who they are, but also what they do (Debebe, 2017). Those identified as leaders are typically also experts or key players in their fields. Hence, leader development goes hand-in-hand with talent development (Debebe, 2017). In order to become leaders in a field, individuals require psychological capital, or *PsyCap* – "patterns of thinking necessary for persisting in challenging circumstances so as to pursue chosen goals" (Debebe, 2017, p. 430). Leaders and experts are those who have developed patterns of thinking that nurture *PsyCap* – *hope*, *optimism*, *self-efficacy*, and *resilience* (Debebe, 2017). Not surprisingly, the majority of participants in the study indicated that leadership was not something they were pursing intentionally. Yet, many of them became leaders in the pursuit of talent and excellence in their fields.

Leader Development is Unique

Participants in the study came from a variety of backgrounds and experiences. For example, participants reported growing up in upper, middle, and lower income households. Some were born into families who were able to provide essential opportunities, support, or resources easily; others had to hustle to find access to opportunities, support, or resources. Some families practiced their religion regularly while others just nominally. Some had fairly turbulent childhoods marked by traumatic events and negative circumstances. Others had relatively stable childhoods with little disturbances and much support. What can be learned from these diverse narratives is that every leader development trajectory is unique. Avolio (2004) wrote, "There are many ways to develop your full leadership potential based on your unique talents, strengths, and experiences. There are many avenues to explore. There simply is no one best way, and even if there was, it would change as the dynamics of leadership change" (p. 8). In the case of leader development, there is no one-size-fits-all formula. The same set of experiences faced by different individuals will produce very different outcomes (Avolio, 2004).

Every leader is also different as a result of their unique leader development pathways. Participants in the study, for instance, alluded to varying leadership styles and how some styles fit them better than others. Nonetheless, every leader is similar because there are "definable *skills, abilities, and mindsets* that differentiate leaders from non-leaders" (Kouzes & Posner, 2016, p. 19). The implications and recommendations provided in this chapter focuses on ways to develop these *skills, abilities, and mindsets*.

Leaders are not Self-Made

Early leadership research emphasized the notion of the "great man" – the belief that leaders are individuals with preordained extraordinary qualities that are responsible for their

success and leadership (Popper, 2000). Leader-related characteristics were assumed to be innate to an individual, rather than a product of cultivation and support from external conditions. In his book, *Outliers*, Malcolm Gladwell (2008) argues that it is much simpler to buy into the story of the self-made man rather than examine the contributions of multiple forces and experiences on one's success. Through an examination of eminent individuals in various fields, Gladwell (2008) concludes that success cannot be attained on one's own. Success, on the other hand, is the product of "steady accumulation of advantages: when and where you are born, what your parents did for a living, and what the circumstances of your upbringing were all make a significant difference in how well you do in the world" (p. 175-176). In other words, circumstances determine the kinds of opportunities, support, or resources one may or may not receive.

In the study, participants often alluded to the importance of people – parents, teachers, mentors, and peers - in their leader development and success overall. Several mentioned that *people* were their most valuable resource. Many explicitly noted that they could not have made it without the support and intervention from parents, peers, and teachers. Talent development researchers have highlighted the importance of collaboration between and support from multiple stakeholders. Olszewski-Kubilius, Subotnik, Davis, and Worrell (2019), for example, assert that:

> Performing at the highest levels in a domain, which often includes bucking the status quo, pushing the boundaries of a field, creating new products, tackling major social issues, competing for prestigious awards or important positions, or taking on tremendous responsibility and significant leadership requires both extraordinary psychological strength and high levels of social skills. Not all individuals have these competencies,

> make the investment to acquire them, or *have the right teachers, coaches, or experiences to cultivate their development*. (p. 163-164)

Similarly, leadership researchers Kouzes and Posner (2016) assert that "leadership is a team sport and not a solo performance" (p. 9). The participation and contribution of various stakeholders is needed for individuals to have access to support, opportunities, and resources conducive to leader development (Paik et al, 2019).

Findings from this study also demonstrate that the bulk of leader development takes place in schools. However, as Sosniak and Gabelko (2008) alluded to in their study of talent development, schools alone cannot be held responsible for leadership development. While school only takes place approximately 180 days a year in some countries, education takes place 365 days a year (Sosniak & Gabelko, 2008). Hence, families, schools, communities, and other stakeholders must all come together to provide more opportunities, support, and resources for leader development to take place throughout the early to later years.

Implications for Practice and Policy

Based on the key findings above, this section provides a brief discussion and key implications based on each PGM factor for practitioners and policymakers.

Development

Participants alluded to leader development being an afterthought rather than a main goal. For example, parents showed more concern towards participants' grades and academic achievement over developing leader-related skills. Hence, leadership opportunities in extracurricular clubs and organizations at school became the primary vehicle for leader development during their early years. Nonetheless, in their first eighteen years, children spend the majority of their time at home (0 – 6 years) and in schools (6 – 18 years) (Paik, 2015).

Parents play an integral role in leader development and should work collaboratively with schools to develop leader-related skills in their children. Previous research has documented the importance of parental involvement in children's learning – both academic and non-academic (Barnard, 2004; Hoover-Dempsey, 1995; Walberg, 1984a; Walberg & Paik, 1997). Furthermore, research has also shown that children's success is optimized in the presence of strong school-family-community partnerships (Epstein et al., 2009). Schools can develop programs to educate parents on ways to nurture leader-related skills in their children at home. At the same time, parents can show more concern for the development of socio-emotional skills such as resilience, empathy, and communication that are equally, if not more, important for children's future success.

The majority of participants only experienced formal leadership training in their later teenage or early adulthood years. Leadership intervention studies, however, have documented that the impact of leadership training in adulthood is typically small and limited to specific organizational settings (Reichard & Paik, 2010). Similarly, studies on talent development also point to the importance of providing early exposure and support in order to maximize talent (Merton, 1968; Paik et al., 2019; Paik & Walberg, 2007). Hence, young Indonesians should be presented with more formal leadership training opportunities earlier in life. These opportunities will help to validate leader development as an important goal alongside other academic or career-oriented goals. Furthermore, participants who experienced formal leadership training during their school years indicated that those opportunities were reserved for students in leadership positions. Schools should ensure that every student is provided with opportunities to cultivate their leadership potential, regardless of whether they hold positional leadership roles and responsibilities.

Ability

The PGM is an effort-ability model that recognizes the importance of both effort and ability (Paik, 2015). While general intelligence (i.e., IQ) matters, prior research has found that it only explains about 25% of the variance in adult achievement (Neisser et al., 1996). Many of the participants indicated that they had higher than average academic ability as young children. In terms of grades, they were generally above average (i.e., As and Bs). Some, though not all, were identified as gifted during their early school years. Interestingly, however, the majority did not use *intelligent* or other ability-oriented words to describe themselves. Rather, they used effort-oriented words such as *diligent*, *hardworking*, *active*. This finding underscores participants' beliefs in the larger role of effort over ability in terms of their success and achievement. To put it in another way, what seems to matter more than actual ability is one's perception of ability – how it can be acquired, shaped, and developed.

Parents and educators should strive to nurture a *growth mindset* in children by praising and rewarding them for their effort rather than performance, helping them develop a positive view of mistakes and failure, and teaching them that effort is a good thing. Furthermore, adults should help children develop *learning goal-orientations* (rather than *performance orientation*) since this has been associated with higher achievement and performance in the long run. Dweck (2007) recommends that adults provide children with "process" praise – "praise for engagement, perseverance, strategies, and improvement". This type of encouragement has been found to have a positive impact on children's subsequent behavior and attitudes. While skill acquisition is important in leader and talent development, a focus on helping children cultivate the right attitudes and beliefs about skill acquisition will prove to be more beneficial in the long run.

Motivation

The majority of participants in the study were driven by *other-centric motivation*. Some were motivated by the desire to repay their parents' hard work and sacrifice, while more than half were motivated by the desire to make an impact. According to Duckworth (2016), this *purpose* or "intention to contribute to the well-being of others" (p. 146) is what helps them to focus on their goals and persevere despite numerous challenges and hardship. However, in addition to having a *reason* to keep going, participants also demonstrated knowledge of *how* to keep going.

Firstly, participants demonstrated having a strong *internal locus of control*. Rotter (1966) introduced the term *locus of control* to describe the degree in which individuals believe life outcomes depend on their own behaviors (internal) or are determined by others, luck, or fate (external). For example, when asked about the cause of their success, participants in the study alluded to having a good work ethic and a positive attitude. In other words, they believed that they exercise a great degree of control over their life outcomes. In previous studies of adolescent leaders, researchers have also found that student leaders were more likely to have a strong internal locus of control compared to non-leaders (C. R. Anderson & Schneier, 1978; McCullough et al., 1994). When asked to list their personality traits, however, participants in this study gave a wide range of answers, many of which were complete opposites. This finding may also provide support for Anderson and Schneier's (1978) argument that personality in terms of locus of control is more predictive of leadership than other personality traits (e.g. extroversion-introversion).

Secondly, participants also demonstrated a high degree of *learned resourcefulness,* defined as "behavioral patterns such as seeking social support, problem-solving, and positive

reappraisals to deal with challenges, carry out self-control, and persist in goal pursuit" (Debebe, 2017). In other words, they knew how to access the opportunities, support, and resources around them. Additionally, Debebe (2017) identified four patterns of thinking that cultivate the psychological capital (PsyCap) necessary for *learned resourcefulness* – hope, optimism, self-efficacy, and resilience. While it is beyond the scope of the current study to discuss these in detail, Debebe (2017) contends that a strong PsyCap is necessary for both authentic leader development and talent development.

Parents and educators need to help children cultivate a strong *internal locus of control* by teaching them to reflect on outcomes and helping them to distinguish between things that they can control and those they cannot. Children can be taught to focus on things within their control and encouraged to use mistakes and failures as opportunities to learn and improve. In addition, parents and educators should also expose children to a variety of experiences that can nurture their PsyCap. For example, participants alluded to the many lessons learned and non-cognitive skills gained through participation in competitions. One participant noted that participating in numerous competitions during her school years allowed her to experience both the joys of winning and the sorrows of losing. These experiences taught her that failure is an inevitable part of life and she learned how to view failure as a learning opportunity rather than an indicator of her ability.

Learning Climates

Consistent with previous research, high expectations – from parents, caregivers, mentors, educators, and schools – generally had a positive influence on participants' academic outcomes and other achievement (Ladson-Billings, 2006; Rosenthal & Jacobson, 1968). With regard to leader development, participants alluded to stepping up as leaders and going the extra mile when

others around them expected them to do so. Parents and caregivers can communicate the importance of education to their children and help them set ambitious (and realistic) goals. Teachers and administrators can also create a culture of high expectations (e.g., college-going culture) in their schools by providing opportunities for *all* students to advance in their studies and interests. Nevertheless, as explained by participants in the study, high expectations can also lead to stress and the loss of school enjoyment when too much emphasis is placed on test scores and grades. Hence, educators should strive to set expectations that cultivate a variety of talents (not just academic talent).

The majority of participants excelled in school despite not enjoying school. Many reported enjoying the social opportunities present at school but disliking the learning process and teaching methods used in the classroom. Since students learn best in an environment where they feel safe and comfortable, administrators and teachers should strive to create engaging learning environments. In addition to the school's academic environment, educators need to pay attention to the emotional and psychological climate of the school. To improve the classroom's climate, teachers could adopt strategies used by organizations to increase workplace satisfaction (e.g., Deci & Ryan, 1996; Firestone & Pennell, 1993). This involves providing challenging tasks, autonomy, and relevant feedback. Classrooms should also respect and support the different ways children learn with student-centered teaching approaches. As Cropley and Urban (2000) wrote, schools should be a place of "psychological safety that demonstrates an acceptance of differentness, openness and tolerance of variability, renunciation of rigid sanctions against harmless mistakes, and provision of a 'creativogenic' climate" (p. 488). In such a climate, students can experience the joy of learning.

Quality of Instruction

The influence of teachers and high-quality formal education in participants' leader development cannot be overstated. Teachers were often the ones who acknowledged their leadership potential, provided opportunities to lead, and presented access to experiences that cultivated leadership even further (e.g., study abroad programs, competitions, scholarships, etc.). Participants typically described their favorite teachers in terms of three competencies that should also be the focus of teacher preparation and professional development: professional (i.e., pedagogical skills, subject knowledge), interpersonal (i.e., social and communication skills), and intrapersonal (i.e., self-awareness) (Collinson, 1996). The participants in the study recalled teachers, as far back as elementary school, who used engaging and creative teaching methods. They also recalled teachers who were passionate and genuinely enjoyed the subjects they taught. Participants indicated that they were also most impacted by teachers who demonstrated genuine and holistic care for their students. Under the tutelage of such teachers, student learning can be maximized.

Perhaps one of the greatest challenges for education policymakers in Indonesia is the fact that high quality teachers, as described by participants, along with better facilities and educational opportunities, are typically concentrated in larger urban areas. Ramadhan (2013) describes schooling conditions in remote and rural areas of Indonesia as "having bad infrastructure, multi-tasking teachers, and lower school operational costs" (p. 152). In other words, schools in remote and rural areas, which make up the majority of Indonesia, tend to be of lower quality. Previous research has also documented the problem of teacher sorting and unequal teacher distribution in many countries, including the United States (D. D. Goldhaber, Lavery, & Theobald, 2015; Lankford, Loeb, & Wyckoff, 2002; Luschei, 2012; Luschei,

Chudgar, & Rew, 2013). These studies have shown that disadvantaged students tend to be taught by teachers with lower achievement and qualifications. Unfortunately, the cumulative effects of advantages and disadvantages imply that the gap between students with higher quality and lower quality teachers will accelerate over time. In the current education system, where students go to school is a big determinant of where they eventually end up in life. Education policymakers and researchers in Indonesia need to examine the systematic distribution of teacher (and other school) characteristics and implement solutions that will improve equity in education quality across the country.

Quantity of Instruction

Research has shown that it takes approximately 10,000 hours of deliberate practice to become an expert in a field (Ericsson et al., 1993). The elusive nature of leader development, however, poses a challenge for measuring quantity of instruction precisely. In the present study, for instance, participants may have had differing definitions of when leader development began. Many indicated that leader development began when they were assigned formal roles in the classroom or school-based clubs or organizations. Nonetheless, as Kouzes and Posner (2016) argues, "leadership is much more about what you do than it is about where you are sitting" (p. 7). Sternberg (2010) refers to an "everyday" kind of leader – leaders without formal titles but who nonetheless exert influence on the people around them. As such, individuals do not need to wait on formal leadership training programs before cultivating leader-related skills. Rather, leader-related skills can be cultivated even in everyday life experiences.

While the majority of participants focused on intentionally building leader-related skills only as adults, research demonstrates that effectiveness of interventions is highest in the early, malleable years. Hence, instruction for leader development can and should begin as early as

possible. Parents and educators do not need to limit leader development opportunities to formal programs or experiences. Debebe (2017) highlights the importance of *learning to do* and *learning to be* for authentic leadership development. While *learning to do* focuses on the acquisition of skills (e.g., communication skills, collaboration skills), *learning to be* involves developing authenticity, self-awareness, and confidence in one's own choices (Debebe, 2017). Both represent the type of learning that should occur early on in one's leader development.

Home Environment

According to Walberg (1984), the curriculum of the home is more predictive of student learning than family socioeconomic status. Indeed, results from the study demonstrate that parental beliefs about education was found to be of greater importance than their actual income. Several participants in the study came from low-income families that valued education. Parents would take on second or even third jobs in order to provide their children with access to learning opportunities and resources. Even in the face of financial hardship, parents demonstrated to their children that there was no price too high when it came to their children's education. Hence, parents can communicate the value of education by prioritizing educational spending over other luxuries.

While there is no perfect or one-size-fits-all formula for parenting, findings from the study highlight the positive influence of parents who provided their children with freedom with limits. From a self-determination theory perspective, this style of parenting, also known as authoritative parenting, allows children to develop into their authentic selves through the provision of autonomy, competence, and relatedness (Ryan & Deci, 2000). Csikszentmihalyi et al. (1993b) similarly found that talented teenagers often had parents who provided them with a combination of independence and supervision. In a similar vein, Debebe (2017) describes

authentic leadership and talent development as “a process of being exposed to learning opportunities, discovering one’s interests, developing interests to build domain-specific talent, and using talents to express personal experiences” (p. 422). Robinson (2009) describes this as being in “the element” – a state in which an individual is doing what he/she is both good at and enjoy doing. The participants in the study described how challenging circumstances (e.g., death or divorce) propelled them to re-evaluate their choices and solidify their life mission. These experiences also helped re-examine their definitions of leadership and what constitutes as success for leaders. Parents and caregivers can help their children develop authentic selves by providing opportunities for discussion about important life choices, helping them to recognize and reflect on their goals and desires, and whenever possible, allowing them to make decisions.

Peers

Peers become a more prominent influence on an individuals’ development as they transition from childhood into adolescence and beyond (A. M. Ryan, 2001). The participants who attended high ranking schools noted how they benefited from a positive peer influence. Peers provided inspiration, motivation, challenge, and competition. A few participants also mentioned how peers helped them adjust to university life, especially when abroad. Many participants also mentioned that their peers were critical in their development as leaders. Peers were often the ones who identified, nominated, and encouraged participants to take on positional leadership roles in and outside of school.

Educators and policymakers should examine how class sorting by ability (e.g., by test scores, or by subjects taken) may put some students at a disadvantage. For instance, when low-achieving students are grouped together, they may not experience the positive peer influence from their high-achieving peers. Schools can also collaborate with other organizations to

provide avenues for peer mentoring. For example, university students can be paired with high school students to provide support and guidance during the college preparation process. High-achieving students can also become peer mentors to their peers struggling academically or socially. Older students can become mentors to younger students and help them navigate school or university life. Since peers were also reported to be important sources of information about scholarships and other learning opportunities, schools can also train students to use social media and other avenues to spread useful information to their peers.

Mentoring

As reported by participants, mentors provided access to opportunities, support, and resources necessary for leader development (Paik et al., 2019). The majority of participants developed informal mentoring relationships with their caregivers, teachers, advisors, or supervisors at work. Adults who were considered mentors were typically the first to recognize their leadership potential. Since prior research has demonstrated the importance of mentoring in leader development, parents, caregivers, and educators should strive to provide children with access to mentors, coaches, and advisors early on (Boston, 1976; Pleiss & Feldhusen, 1995). Schools can partner with private organizations in providing additional mentoring opportunities for students. Private firms, such as the McKinsey Consulting Company, have been known to provide high quality leader development programs in Indonesia and around the world.

Additionally, as studies have shown, mentor types and characteristics influence mentoring outcomes. As such, schools and organizations should strive to recruit mentors from various genders, ethnicities, religions, backgrounds, and professional experiences. The benefits of peer mentoring – for both the mentor and mentee – should also not be discounted. Schools and organizations should set up more opportunities for students in high school and university to

serve as peer mentors. To optimize mentoring relationships, high-quality training and consistent support for the mentors should also be provided. More specifically, mentors should be taught the stages of leader identity development so that they can help cultivate strong leader identities in their mentees.

Extracurricular Time

As students, participants spent significant portions of their out-of-school time in organized clubs and activities. In these settings, many discovered, cultivated, and practiced their leadership. Findings from this study demonstrate that participation in extracurricular activities was one of the most important avenues for leader development. As such, education policymakers should ensure that sufficient monetary and human resources is dedicated towards high-quality afterschool programming for all students. These activities should be structured but also flexible so that participants can exercise autonomy and leadership (Larson, 2000). Involvement in extracurricular activities should also be considered alongside grades and examination scores in the university application process. Furthermore, coaches and instructors should also create mastery-oriented rather than performance-oriented climates to maximize learning and growth (Dweck, 2006).

Today, technology and social media competes for children's time. Children today face more distractions and competition for their time than in the past. Parents and caregivers should strive to instill the love of reading early on in their children. Even before children learn how to read on their own, parents can spend time reading to them daily and making reading an enjoyable activity (Hutton et al., 2015). Since technology is here to stay, parents, caregivers, and educators should look for ways to make technology a tool for learning, rather than a distraction from learning. More importantly, in light of the tremendous information children are bombarded with

every day, children need to be taught how to think critically and evaluate information for truthfulness and reliability. They also need to learn how to engage with and use technology in healthy ways and avoid becoming victims or perpetrators of cyber-bullying.

Contextual Factors

The majority of participants came from middle-income families and experienced a fairly comfortable upbringing. Their parents were typically able to provide them with access to educational opportunities and resources. While the PGM factors are alterable, *contextual factors* - for instance, family socioeconomic status – are typically not. Fortunately, the participants in the study who came from low-income families were able to overcome financial and other barriers to completing their education and succeeding in their careers. Policymakers should examine how contextual factors such as race, ethnicity, religion, gender or SES may put certain individuals at a disadvantage or advantage in terms of leader development (Paik, 2013; Paik et al, 2020). The participants from low-income families, for instance, mentioned that they did not have access to information about scholarships and other learning opportunities outside of their villages. Policymakers and educators should strive to provide better access to valuable information and other opportunities, support, and resources that gives disadvantaged groups an equal chance of achieving in life.

Implications for Research

As one of the few studies on leader development in Indonesia, the findings from this study provide many implications for future research. Firstly, future research should examine other populations of leaders and high-achievers in Indonesia. The sample used in the current study was limited to alumni of Indonesia Mengajar. As such, participants may share unique characteristics that differ from other groups of leaders. Future researchers should examine

developmental patterns in other groups of high-achieving individuals in Indonesia, such as the Young Leaders for Indonesia organization or Fulbright scholars. Furthermore, since the majority of participants came from Java, the most densely populated island in Indonesia, future research should also examine the development of leaders from less populated and rural parts of Indonesia. The current research also involved participants who were considerably young and only starting out in their fields. Findings from older and more eminent participants may provide additional insight into leader development in Indonesia.

Secondly, findings from this study can also serve to help improve future instruments examining talent and leader development, especially in the context of Indonesia. Some questions may be revised or developed more for an Indonesian population. Future researchers may also focus on conducting exclusively quantitative studies with larger sample sizes. The quantitative data from a larger number of participants could help to amplify patterns of similarities and differences in the experiences of Indonesian leaders (i.e., increased power). Furthermore, a larger sample allows for non-parametric statistics to be performed. Comparison groups may also provide greater insight into key differences in the developmental experiences of individuals across various factors.

Finally, findings from the study may also be used as a starting point for leader development studies in similar economies. Indonesia shares many cultural, social, and economic similarities with neighboring countries such as Malaysia, Vietnam, and Thailand. As such, some of the findings may also be relevant to similar countries or contexts in Asia or elsewhere. Furthermore, future comparative studies examining similarities and differences in leader development in Asian and Western countries could also yield interesting insights. For instance, researchers could investigate whether Indonesian and American leaders share similar

developmental trajectories. Researchers could also examine how contextual and systemic factors unique to each country influence leader development. Currently, the wealth of research and books on leadership and high achievement is concentrated in the West. Hence, findings from a comparative study may help parents, educators, and policymakers seeking to import Western parenting or educational recommendations and strategies into the Indonesian context.

Conclusion

This study used the Productive Giftedness Model (Paik, 2013, 2015) to examine the influence of individual aptitude, instructional, and environmental factors on leader development in Indonesia. While every leader's development trajectory was unique, their experiences highlight the importance of having supportive conditions that promote leader development (Paik et. al, 2020). Findings from the study demonstrate that leaders are made through the intentional (and sometimes unintentional) cultivation of leader-related skills. Furthermore, leaders are not self-made, but are the products of the opportunities, support, and resources presented to them by countless others. Gladwell (2008) similarly concludes in his book,

> Superstar lawyers and math whizzes and software entrepreneurs appear at first blush to lie outside ordinary experience. But they don't. *They are the products of history and community, of opportunity and legacy.* Their success is not exceptional or mysterious. It is grounded in a web of advantages and inheritances, some deserved, some not, some earned, some just plain lucky – but all critical to making them who they are. (p. 285)

Fortunately, the conditions that support the cultivation of leaders are alterable and can be influenced by the choices made by individuals, parents, caregivers, educators, and policymakers every day. Stakeholders must work together to create conditions ideal for leader development from the early through the later years to ensure a future with leaders that make a difference.

References

Ainsworth, M. D., Blehar, M. C., Waters, E., & Wall, S. N. (2015). *Patterns of attachment: A psychological study of the strange situation*. New York, NY: Taylor & Francis.

Albert, R. S. (1980). Family positions and the attainment of eminence: A study of special family positions and special family experiences. *Gifted Child Quarterly*, *24*(2), 87–95.

Allen, T. D., & Eby, L. T. (2003). Relationship effectiveness for mentors: Factors associated with learning and quality. *Journal of Management*, *29*(4), 469–486.

Allen, T. D., & Poteet, M. L. (1999). Developing effective mentoring relationships: Strategies from the mentor's viewpoint. *The Career Development Quarterly*, *48*(September), 59–73.

Anderson, C. R., & Schneier, C. E. (1978). Locus of control, leader behavior, and leader performance among management students. *Academy of Management Journal*, *21*(4), 690–698. https://doi.org/10.2307/255709

Anderson, L. W. (1984). An introduction to time and school learning. In L. W. Anderson (Ed.), *Time and school learning: Theory, research, and practice* (pp. 1–12). New York, NY: St. Martin's Press, Inc.

Andeweg, R. B., & Van Den Berg, S. B. (2003). Linking birth order to political leadership: The impact of parents or sibling interaction? *Political Psychology*, *24*(3), 605–623. https://doi.org/10.1111/0162-895X.00343

Archive of Universitas Gadjah Mada. (2014). Pengerahan Tenaga Mahasiswa (1951-1962).

Armstrong, T. (1998). *Awakening genius in the classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.

Arvey, R., & Chaturvedi, S. (2010). Examining the genetic basis of leadership. In *Early development and leadership: Building the next generation of leaders* (pp. 59–70).

https://doi.org/10.4324/9780203818343

Avolio, B. J. (2004). *Leadership development in balance: Made/born*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Avolio, B. J., Avey, J. B., & Quisenberry, D. (2010). Estimating return on leadership development investment. *Leadership Quarterly*, *21*(4), 633–644. https://doi.org/10.1016/j.leaqua.2010.06.006

Avolio, B. J., Reichard, R. J., Hannah, S. T., Walumbwa, F. O., & Chan, A. (2009). A meta-analytic review of leadership impact research: Experimental and quasi-experimental studies. *Leadership Quarterly*, *20*(5), 764–784. https://doi.org/10.1016/j.leaqua.2009.06.006

Avolio, B. J., Rotundo, M., & Walumbwa, F. O. (2009). Early life experiences as determinants of leadership role occupancy: The importance of parental influence and rule breaking behavior. *Leadership Quarterly*, *20*(3), 329–342. https://doi.org/10.1016/j.leaqua.2009.03.015

Baker, J., & Horton, S. (2004). A review of primary and secondary influences on sport expertise. *High Ability Studies*, *15*(2), 211–228. https://doi.org/10.1080/1359813042000314781

Baker, J., Horton, S., Robertson-Wilson, J., & Wall, M. (2003). Nurturing sport expertise: Factors influencing the development of elite athlete. *Journal of Sports Science and Medicine*, *2*(1), 1–9.

Barnard, W. M. (2004). Parent involvement in elementary school and educational attainment. *Children and Youth Services Review*, *26*(1), 39–62. https://doi.org/10.1016/j.childyouth.2003.11.002

Baron, R. A. (2009). Effectual versus predictive logics in entrepreneurial decision making: Differences between experts and novices. Does experience in starting new ventures change

the way entrepreneurs think? Perhaps, but for now, “Caution” is essential. *Journal of Business Venturing*, *24*(4), 310–315. https://doi.org/10.1016/j.jbusvent.2008.04.001

Bartone, P. T., Snook, S. A., Forsythe, G. B., Lewis, P., & Bullis, R. C. (2007). Psychosocial development and leader performance of military officer cadets. *Leadership Quarterly*, *18*(5), 490–504. https://doi.org/10.1016/j.leaqua.2007.07.008

Bass, B. M., & Bass, R. (2008). *The Bass handbook of leadership: Theory, research, and managerial applications*. New York, NY: Free Press.

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monograph*, *4*(1, Pt.2), 1–103. https://doi.org/10.1037/h0030372

Beatson, R. M., & Halloran, M. J. (2013). Group status hierarchy legitimacy effects on effort versus ability attributions for ingroup and outgroup failures. *Current Psychology*, *32*(3), 234–241. https://doi.org/10.1007/s12144-013-9179-0

Bedard, K., & Dhuey, E. (2006). The persistence of early childhood maturity: International evidence of long-run age efects. *The Quarterly Journal of Economics*, *121*(4), 1437–1472. https://doi.org/10.1162/qjec.121.4.1437

Bempechat, J., London, P., & Dweck, C. S. (1991). Children’s conceptions of ability in major domains. *Child Study Journal*, *21*(1), 11–36.

Berson, Y., Dan, O., & Yammarino, F. J. (2006). Attachment style and individual differences in leadership perceptions and emergence. *The Journal of Social Psychology*, *146*(2), 165–182. https://doi.org/10.3200/SOCP.146.2.165-182

Bittman, A. Y. (2008). *Exploring factors that promote or hinder the career productivity of academically gifted female international Olympians in the disciplines of mathematics, physics, and chemistry*. ST. JOHN’S UNIVERSITY, SCHOOL OF EDUCATION AND

HUMAN SERVICES.

Bjork, C. (2004). Decentralisation in education, institutional culture and teacher autonomy in Indonesia. *International Review of Education*, *50*, 245–262.

Bjork, C. (2005). *Indonesian education: Teachers, schools, and central bureaucracy*. London, UK: Routledge.

Bloom, B. S. (1985). *Developing talent in young people*. New York, NY: Ballantine Books.

Bloom, B. S., & Sosniak, L. A. (1981). Talent development vs. schooling. *Educational Leadership*, *39*, 86–94.

Blumenfeld, P. C., Pintrich, P. R., & Hamilton, V. L. (2011). Children's concepts of ability, effort, and conduct. *American Educational Research Journal*, *48*(2), 303–333. https://doi.org/10.3102/0002831212469045

Bono, J. E., & Judge, T. A. (2004). Personality and transformational and transactional leadership: a meta-analysis. *The Journal of Applied Psychology*, *89*(5), 901–910. https://doi.org/10.1037/0021-9010.89.5.901

Bornstein, M. H. (1989). Sensitive periods in development: Structural characteristics and causal interpretations. *Psychological Bulletin*, *105*(2), 179–197.

Bornstein, M. H., & Colombo, J. (2012). Infant cognitive functioning and mental development. In S. M. Pauen (Ed.), *Early childhood development and later achievement* (pp. 118–147). New York, NY: Cambridge University Press.

Boston, B. O. (1976). *The sorcerer's apprentice: A case study in the role of the mentor*. Reston, VA: Council for Exceptional Children (ERIC Document Reproduction Service No. ED 224 944).

Burke, R. J., McKeen, C. A., & McKenna, C. (1993). Correlates of mentoring in organizations:

The mentor's perspective. *Psychological Reports*, *72*(3), 883–896.

Cairns, R. B., Cairns, B. D., Neckerman, H. J., Gest, S. D., & Gariepy, J.-L. (1988). Social networks and aggressive behavior: Peer support or peer rejection? *Developmental Psychology*, *24*(6), 815–823.

Calman, L. J., & Tarr-Whelan, L. (2005). *Early childhood education for all: A wise investment*. New York, NY: Legal Momentum.

Campbell, C. M., Smith, M., Dugan, J. P., & Komives, S. R. (2012). Mentor and college student leadership outcomes: The importance of the position and process. *The Review of Higher Education*, *35*, 595–625.

Carroll, J. B. (1984). The model of school learning: Progress of an idea. In L. W. Anderson (Ed.), *Time and school learning: Theory, research, and practice* (pp. 15–45). New York, NY: St. Martin's Press, Inc. .

Casey, K. M. A., & Shore, B. M. (2000). Mentors' Contributions to Gifted Adolescents' Affective, Social, and Vocational Development. *Roeper Review*, *22*(4), 227.

Central Intelligence Agency [CIA]. (2015). The world factbook. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/index.html

Challman, R. C. (1932). Factors influencing friendships among preschool children. *Child Development*, *3*(2), 146. https://doi.org/10.2307/1125388

Chan, K.-Y., & Drasgow, F. (2001). Toward a theory of individual differences and leadership: Understanding the motivation to lead. *Journal of Applied Psychology*, 481–498.

Chan, K.-Y., Rounds, J., & Drasgow, F. (2000). The relation between vocational interests and the motivation to lead. *Journal of Vocational Behavior*, *57*(2), 226–245. https://doi.org/10.1006/jvbe.1999.1728

Chao, R. (2001). Extending research on the consequences of parenting style for Chinese Americans and European Americans. *Child Development*.

Chelladurai, P. (2010). Participation in sport and leader development. In *Early development and leadership: Building the next generation of leaders* (pp. 95–113). https://doi.org/10.4324/9780203818343

CIA World Factbook. (2020). Indonesia.

Collinson, V. (1996). Becoming an exemplary teacher: Integrating professional, interpersonal, and intrapersonal knowledge. In *Paper presented at the annual meeting of the Japan-United States Teacher Education Consortium* (p. 17).

Cooper, A. (1989). Religion in Indonesia's classrooms. *Religion and Public Education*, *16*(1), 103–106.

Côté, J., Baker, J., & Abernethy, B. (2007). Practice and play in the development of sport expertise. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of Sports Psychology* (Third, pp. 184–202). Hoboken, NJ.

Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science and Coaching*, *4*(3), 307–323. https://doi.org/10.1260/174795409789623892

Covington, M. V., & Omelich, C. L. (1979). Effort: The double-edged sword in school achievement. *Journal of Educational Psychology*, *71*(2), 169–182.

Creswell, J. W. (2013). *Qualitative inquiry and research design* (3rd ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Crisp, G., Baker, V. L., Griffin, K., Lunsford, G. L., & Pifer, M. J. (2017). *Mentoring undergraduate students*. San Francisco, CA: Jossey-Bass.

Crisp, G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. *Research in Higher Education*, *50*(6), 525–545. https://doi.org/10.1007/s11162-009-9130-2

Cropley, A., & Urban, K. (2000). Programs and strategies for nurturing creativity. In K. A. Heller, F. J. Monks, R. F. Subotnik, & R. J. Sternberg (Eds.), *International handbook of giftedness and talent* (pp. 481–494). Oxford, UK: Elsevier. https://doi.org/10.1016/B978-008043796-5/50034-6

Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). *Talented teenagers: The roots of success and failure*. Cambridge, England: Cambridge University Press.

Danish, S. J. (2000). Youth and community development: How after-school programming can make a difference. In S. J. Danish & T. P. Gullotta (Eds.), *Developing competent youth and strong communities through after-school programming* (pp. 275–301). Washington, DC.: Child Welfare League of America, Inc.

Day, D. V. (2001). Leadership development: A review in context. *The Leadership Quarterly*, *11*(4), 581–613. https://doi.org/10.1016/S1048-9843(00)00061-8

Day, D. V., Fleenor, J. W., Atwater, L. E., Sturm, R. E., & McKee, R. A. (2014). Advances in leader and leadership development: A review of 25 years of research and theory. *Leadership Quarterly*, *25*(1), 63–82. https://doi.org/10.1016/j.leaqua.2013.11.004

Day, D. V., & Harrison, M. M. (2007). A multilevel, identity-based approach to leadership development. *Human Resource Management Review*, *17*(4), 360–373.

Day, D. V., Harrison, M. M., & Halpin, S. M. (2009). *An integrative approach to leader development: Connecting adult development, identity, and expertise*. New York, NY: Psychology Press.

Day, D. V., Zaccaro, S. J., & Halpin, S. M. (2004). *Leaders' development for transforming organizations: Growing leaders for tomorrow*. New York, NY: Psychology Press.

Debebe, G. (2017). Authentic leadership and talent development: Fulfilling individual potential in sociocultural context. *Advances in Developing Human Resources*, *19*(4), 420–438. https://doi.org/10.1177/1523422317728938

Deci, E. L. (1975). *Intrinsic motivation*. New York, NY: Plenum Press.

Deci, E. L., & Ryan, R. M. (1996). Need satisfaction and the self-regulation of learning. *Learning & Individual Differences*, *8*, 165–184.

Derue, D. S., & Wellman, N. (2009). Developing leaders via experience: The role of developmental challenge, learning orientation, and feedback availability. *The Journal of Applied Psychology*, *94*(4), 859–875. https://doi.org/10.1037/a0015317

Desilver, D. (2014). School days: How the U.S. compares with other countries.

Dhuey, E., & Lipscomb, S. (2008). What makes a leader? Relative age and high school leadership. *Economics of Education Review*, *27*(2), 173–183. https://doi.org/10.1016/j.econedurev.2006.08.005

di Gropello, E., Kruse, A., & Tandon, P. (2011). *Skills for the labor market in Indonesia: Trends in demand, gaps, and supply*. Washington, DC.: The World Bank. https://doi.org/10.1596/978-0-8213-8614-9

Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Donald, F. R., & Fraleigh, M. J. (1987). The relation of parenting style ot adolescent school performance. *Child Development*, *58*(5), 1244–1257.

Duckworth, A. L. (2016). *Grit: The power of passion and perseverance*. New York, NY: Simon & Schuster.

Duckworth, A. L., Kirby, T. A., Tsukayama, E., Berstein, H., & Ericsson, K. A. (2011). Deliberate pratice spells success: Why grittier competitors triumph at National Spelling Bee. *Social Psychology and Personality Science*, *2*(2), 174–181.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perverance and passion for long-term goals. *Journal of Personality and Social Psychology*, *92*(6), 1087–1101.

Dugan, J. P., & Komives, S. R. (2007). Developing leadership capacity in college students: Findings from a national study. *A Report from the Multi-Institutional Study of Leadership. College Park, MD: National Clearinghouse for Leadership Programs.*

Dugan, J. P., & Komives, S. R. (2010). Influences on college students' capacities for socially responsible leadership. *Journal of College Student Development2*, *51*, 525–549.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*(10), 1040–1048. https://doi.org/10.1037/0003-066X.41.10.1040

Dweck, C. S. (Ed.). (1999). *Self theories: Their role in motivation, personality, and development*. Philadelphia, PA: Psychology Press.

Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Ballantine Books.

Dweck, C. S. (2007a). The perils and promise of praise. *Educational Leadership*, *65*(2), 34–39.

Dweck, C. S. (2007b). The secret to raising smart kids. *Scientific American Mind*, *18*(6), 36–43. https://doi.org/10.1038/scientificamericanmind1207-36

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*(2), 256–273.

Ely, K., Boyce, L. A., Nelson, J. K., Zaccaro, S. J., Hernez-Broome, G., & Whyman, W. (2010).

Evaluating leadership coaching: A review and integrated framework. *Leadership Quarterly*, *21*, 585–599.

Epstein, J. (2005). Developing and sustaining comprehensive programs of school, family, and community partnerships: Summary of five years of NNPS research. In *Plenary Round Table*. Oviedo, Spain.

Epstein, J., Sanders, M. G., Sheldon, S., Simon, B. S., Salinas, K. C., Jansorn, N. R., … Williams, K. J. (2009). *School, Family, and Community Partnerships: Your Handbook for Action* (3 edition). Thousand Oaks, Calif: Corwin.

Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, *100*(3), 363–406. https://doi.org/10.1037/0033-295X.100.3.363

Ericsson, K. A., Nandagopal, K., & Roring, R. W. (2009). Toward a science of exceptional achievement: Attaining superior performance through deliberate practice. *Annals of the New York Academy of Sciences*, *1172*, 199–217. https://doi.org/10.1196/annals.1393.001

Ericsson, K. A., Prietula, M. J., & Cokely, E. (2007). The making of an expert. *Harvard Business Review*, *85*(11), 146–147. https://doi.org/Article

Fairweather, E., & Cramond, B. (2010). Infusing creative and critical thinking into the curriculum together. In R. A. Beghetto & J. C. Kaufman (Eds.), *Nurturing creativity in the classroom* (pp. 113–141). New York, NY: Cambridge University Press.

Farver, J. A. M. (1996). Aggressive behavior in preschoolers' social networks: Do birds of a feather flock together? *Early Childhood Research Quarterly*, *11*, 333–350.

Firestone, W., & Pennell, J. (1993). Teacher commitment, working conditions, and differential incentive policies. *Review of Educational Research*, *63*(4), 489–525.

Flick, U. (2011). *Quality in qualitative research*. *Designing qualitative research*. London, UK: SAGE Publications, Ltd. https://doi.org/10.1177/107780049900500402

Folmer, A. S., Cole, D. A., Sigal, A. B., Benbow, L. D., Satterwhite, L. F., Swygert, K. E., & Ciesla, J. A. (2008). Age-related changes in children's understanding of effort and ability: Implications for attribution theory and motivation. *Journal of Experimental Child Psychology*, *99*(2), 114–134. https://doi.org/10.1016/j.jecp.2007.09.003

Fredrick, W. C., & Walberg, H. J. (1980). Learning as a function of time. *Journal of Educational Reserach*.

Fuligni, A. J., & Stevenson, H. W. (1995). Time use and mathematics achievement among American, Chinese, and Japanese high school students. *Child Development*, *66*(3), 830–842. https://doi.org/10.2307/1131953

Gardner, H. (2011). *Leading minds: An anatomy of leadership*. New York, NY: Basic Books.

Gardner, H., & Csikszentmihalyi, M. (2010). Positioning future leaders on the good work track. In *Early development and leadership: Building the next generation of leaders* (pp. 255–272).

Gardner, J. (1990). *On Leadership*. New York, NY: The Free Press.

Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social acceptance, friendships, and peer networks. *Journal of School Psychology2*, *41*(4), 235–284.

Gladwell, M. (2008). *Outliers: The story of success*. London, UK: Allen Lane.

Gneezy, U., Meier, S., & Rey-biel, P. (2011). When and why incentives (don't) work to modify behavior. *Journal of Economic Perspectives*, *25*(4), 191–210. https://doi.org/10.1257/jep.25.4.191

Goertzel, V., Goertzel, M. G., Goertzel, T. G., & Hansen, A. (2004). *Cradles of eminence: Childhoods of more than 700 famous men and women* (2 edition). Scottsdale, Ariz: Gifted Psychology Press.

Goldhaber, D. (2012). *The nature-nurture debates: Bridging the gap*. New York, NY: Cambridge University Press.

Goldhaber, D. D., Lavery, L., & Theobald, R. (2015). Uneven playing field? Assessing the teacher quality gap between advantaged and disadvantaged students. *Educational Researcher*, *44*(5), 293–307. https://doi.org/10.3102/0013189X15592622

Gottfried, A. E., Fleming, J. S., & Gottfried, A. W. (1998). Role of cognitively stimulating home environment in children's academic intrinsic motivation: A longitudinal study. *Child Development*, *69*(5), 1448–1460. https://doi.org/10.1111/j.1467-8624.1998.tb06223.x

Gottfried, A. E., Gottfried, A. W., Reichard, R. J., Guerin, D. W., Oliver, P. H., & Riggio, R. E. (2011). Motivational roots of leadership: A longitudinal study from childhood through adulthood. *Leadership Quarterly*, *22*(3), 510–519. https://doi.org/10.1016/j.leaqua.2011.04.008

Gottfried, A. W., & Gottfried, A. E. (2010). Paths from gifted motivation to leadership. In *Early development and leadership: Building the next generation of leaders* (pp. 71–91). https://doi.org/10.4324/9780203818343

Gottfried, M. A., & Ream, R. (2014). Socioeconomic status and education. In D. J. Brewer & L. O. Picus (Eds.), *Encyclopedia of education economics and finance* (pp. 687–691). Thousand Oaks, CA: SAGE Publications.

Gould, D., Dieffenbach, K., & Moffett, A. (2002). Psychological characteristics and their development in olympic champions. *Journal of Applied Sport Psychology*, *14*(3), 172–204.

https://doi.org/10.1080/10413200290103482

Greenfield, G. M., Keup, J. R., & Gardner, J. N. (2013). *Developing and sustaining successful first year programs: A guide for practitioners*. San Francisco, CA: Jossey-Bass.

Grolnick, W. S. (2003). *The psychology of parental control: How well-meant parenting backfires*. Hillside, NJ: Erlbaum.

Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). Inner resources for school achievement: Motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology*. https://doi.org/10.1037/0022-0663.83.4.508

Guerin, D. W., Oliver, P. H., Gottfried, A. W., Gottfried, A. E., Reichard, R. J., & Riggio, R. E. (2011). Childhood and adolescent antecedents of social skills and leadership potential in adulthood: Temperamental approach/withdrawal and extraversion. *Leadership Quarterly*, *22*(3), 482–494. https://doi.org/10.1016/j.leaqua.2011.04.006

Hancock, D., Dyk, P. H., & Jones, K. (2012). Adolescent involvement in extracurricular activities: Influences on leadership skills. *Journal of Leadership Education*, *11*(1), 84–101.

Hastings, L., & Kane, C. (2018). Distinguishing mentoring, coaching, and advising for leadership development. *New Directions for Student Leadership*, *158*, 9–22. https://doi.org/10.1002/yd

Haynes, R. M., & Chalker, D. M. (1997). World-class schools. *American School Board Journal*.

Heckman, J. J. (2000). *Invest in the very young*. Chicago, IL: Ounce of Prevention Fund; The University of Chicago Harris School of Public Policy Studies.

Heckman, J. J. (2011). The economics of inequality: The value of early childhood education. *American Educator*, 31–36.

Heckman, J. J., & Masterov, D. V. (2007). The productivity argument for investing in young

children. *Review of Agricultural Economics*, *29*(3), 446–493. https://doi.org/10.1111/j.1467-9353.2007.00359.x

Hendriks, M., Luyten, H., Scheerens, J., & Sleegers, P. (2014). Meta-analyses. In *Effectiveness of time investments in education: Insights from a review and meta-analyses* (pp. 55–142). The Netherlands: Springer. https://doi.org/10.1007/978-3-319-00924-7

Heyneman, S. P. (1980). Differences between developed and developing countries: Comment on Simmons and Alexander's "Determinants of school achievement." *Economic Development and Cultural Change*, *28*(2), 403–406.

Hofferth, S. L., & Sandberg, J. F. (2001). How American children spend their time. *Journal of Marriage and the Family*, *63*(2), 295–308.

Hogarth, R. M., & Villeval, M. C. (2014). Ambiguous incentives and the persistence of effort: Experimental evidence. *Journal of Economic Behavior and Organization*, *100*, 1–19. https://doi.org/10.1016/j.jebo.2014.01.006

Hong, E., & Milgram, R. M. (2011). Creative-thinking ability and talent development. In *Preventing talent loss* (pp. 35–46). New York, NY: Routledge.

Hoon, C. (2011). Mapping 'Chinese' Christian schools in Indonesia: Ethnicity, class, and religion. *Asia Pacific Education Review*, *12*, 403–411. https://doi.org/10.1007/s12564-010-9144-7

Hoover-Dempsey, K. V. (1995). Parental involvement in children's education: Why does it make a difference? *Teachers College Record*, *97*, 310–331.

Horowitz, F. D. (2009). A developmental understanding of giftedness and talent. In F. D. Horowitz, R. F. Subotnik, & D. J. Matthews (Eds.), *The development of giftedness and talent across the life span* (pp. 3–19). Washington, DC: American Psychological

Association.

Horton, S. (2012). Environmental influences on early development in sports experts. In J. Baker, S. Cobley, & J. Schorer (Eds.), *Talent identification and development in sport: International perspectives* (pp. 39–50). New York, NY: Routledge.

Hull, J., & Newport, M. (2011). Time in school: How does the U.S. compare? Retrieved from http://www.centerforpubliceducation.org/Main-Menu/Organizing-a-school/Time-in-school-How-does-the-US-compare

Hutton, J. S., Horowitz-Kraus, T., Mendelsohn, A. L., DeWitt, T., & Holland, S. K. (2015). Home reading environment and brain activation in preschool children listening to stories. *Pediatrics*, *136*(3), 466–478. https://doi.org/10.1542/peds.2015-0359

Indonesia Mengajar. (2015a). Indonesia Mengajar: Sejarah. Retrieved from https://indonesiamengajar.org/tentang-indonesia-mengajar/sejarah/

Indonesia Mengajar. (2015b). Indonesia Mengajar: Tentang pengajar muda. Retrieved from https://indonesiamengajar.org/tentang-pengajar-muda/jejak-pengajar-muda/

Indonesia Mengajar. (2015c). Indonesia Mengajar: Visi dan misi. Retrieved from https://indonesiamengajar.org/tentang-indonesia-mengajar/visi-dan-misi/

Indonesia Mengajar. (2016). *Program pengiriman pengajar muda*. Jakarta, Indonesia: Indonesia Mengajar.

Jarvin, L., & Subotnik, R. F. (2010). Wisdom from conservatory faculty: Insights on success in classical music performance. *Roeper Review: A Journal on Gifted Education*, *32*(2), 78–87. https://doi.org/http://dx.doi.org/10.1080/02783191003587868

Jarvin, L., & Subotnik, R. F. (2015). Academic talent development in North America and Europe. *Asia Pacific Education Review*, *16*(2), 297–306. https://doi.org/10.1007/s12564-

015-9370-0

Johnstone, J. N., & Jiyono. (1983). Out-of-school factors and educational achievement in Indonesia. *Comparative Education Review*, *27*(2), 278–295.

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, *87*(4), 765–780. https://doi.org/10.1037//0021-9010.87.4.765

Judge, T. A., Colbert, A. E., & Ilies, R. (2004). Intelligence and leadership: A quantitative review and test of theoretical propositions. *The Journal of Applied Psychology*, *89*(3), 542–552. https://doi.org/10.1037/0021-9010.89.3.542

Keller, T. (2003). Parental images as a guide to leadership sensemaking: An attachment perspective on implicit leadership theories. *Leadership Quarterly*, *14*(2), 141–160. https://doi.org/10.1016/S1048-9843(03)00007-9

Kelly, D. R., Matthews, M. D., & Bartone, P. T. (2014). Grit and hardiness as predictors of performance among West Point cadets. *Military Psychology*, *26*(4), 327–342.

Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: do traits matter? *Academy of Management Executive*, *5*(2), 48–60. https://doi.org/10.5465/AME.1991.4274679

Koentjaraningrat, R. M. (1985). *Javanese Culture*. Singapore: Oxford University Press.

Komives, S. R., Longerbeam, S. D., Mainella, F. C., Osteen, L., Owen, J. E., & Wagner, W. (2009). Leadership identity development: Challenges in applying a developmental model. *Journal of Leadership Education*, *8*(1), 11–47. https://doi.org/10.1177/1078390308327049

Komives, S. R., Longerbeam, S. D., Owen, J. E., Mainella, F. C., & Osteen, L. (2006). A leadership identity development model: Applications from a grounded theory. *Journal of College Student Development*, *47*(4), 401–418. https://doi.org/10.1353/csd.2006.0048

Komives, S. R., Owen, J. E., Longerbeam, S. D., Mainella, F. C., & Osteen, L. (2005). Developing a leadership identity: A grounded theory. *Journal of College Student Development*, *46*(6), 593–611. https://doi.org/10.1353/csd.2005.0061

Korotov, K. (2016). Coaching for leadership development. In T. Bachkirova, G. Spence, & D. Drake (Eds.), *The SAGE handbook of coaching* (pp. 139–158). Los Angeles, CA: SAGE Publications.

Kouzes, J. M., & Posner, B. Z. (2016). *Learning leadership*. San Francisco, CA: The Leadership Challenge - A Wiley Brand.

Kram, K. E., & Isabella, L. A. (1985). Mentoring alternatives: The role of peer relationships in career development. *Academy of Management Journal*, *28*(1), 110–132. https://doi.org/10.2307/256064

Krathwohl, D. R. (2009). *Methods of educational research: The logic of methods* (Third). Long Grove, IL: Waveland Press, Inc.

Kristiansen, S., & Pratikno. (2006). Decentralising education in Indonesia. *International Journal of Educational Development*, *26*, 513–531. https://doi.org/10.1016/j.ijedudev.2005.12.003

Kula, S. M. (2013). *Explaining the success of high-achieving 2nd generation Latino students at elite colleges and universities* (Doctoral dissertation). Claremont, CA.

Ladson-Billings, G. (2006). It’s not the culture of poverty, it’s the poverty of culture: The problem with teacher education. *Anthropology and Education Quarterly*, *37*(2), 104–109.

Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: A descriptive analysis. *Educational Evaluation & Policy Analysis*, *24*(1), 37–62. https://doi.org/10.3102/01623737024001037

Larson, R. W. (2000). Toward a psychology of positive youth development. *American*

Psychologist, *55*(I), 170–183. https://doi.org/10.1037//0003-066X

Larson, R. W., Hansen, D. M., & Moneta, G. (2006). Differing profiles of developmental experiences across types of organized youth activities. *Developmental Psychology*, *42*(5), 849–863. https://doi.org/10.1037/0012-1649.42.5.849

Larson, R. W., & Verma, S. (1999). How children and adolescents spend time across cultural settings of the world: Work, play and developmental opportunities. *Psychological Bulletin*, *125*(125), 701–736.

Li, W. D., Arvey, R. D., & Song, Z. (2011). The influence of general mental ability, self-esteem and family socioeconomic status on leadership role occupancy and leader advancement: The moderating role of gender. *Leadership Quarterly*, *22*(3), 520–534. https://doi.org/10.1016/j.leaqua.2011.04.009

Liang, B., & Grossman, J. M. (2007). Diversity and youth mentoring relationships. In T. D. Allen & L. T. Eby (Eds.), *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 239–258). Malden, MA: Blackwell Publishing Ltd.

Lin, Y., Lai, P., Chiu, Y. C., Hsieh, H., & Chen, Y. (2016). Experience of dormitory peer mentors: Journey of self-learning and development. *Education*, *136*, 437–450.

Loeb, S., Dynarski, S., Mcfarland, D., Morris, P., Reardon, S., & Reber, S. (2017). *Descriptive analysis in education: A guide for researchers*.

Lord, R. G., De Vader, C. L., & Alliger, G. M. (1986). A Meta-Analysis of the Relation Between Personality Traits and Leadership Perceptions. An Application of Validity Generalization Procedures. *Journal of Applied Psychology*, *71*(3), 402–410. https://doi.org/10.1037/0021-9010.71.3.402

Lord, R. G., & Hall, R. J. (2005). Identity, deep structure, and the development of leadership

skill. *The Leadership Quarterly*, *16*(4), 591–615.

Lucas, K. F. (2001). The social construction of mentoring roles. *Mentoring & Tutoring: Partnership in Learning*, *9*(1), 23–47. https://doi.org/10.1080/13611260120046665

Luschei, T. F. (2012). The effectiveness and distribution of male primary teachers: Evidence from two Mexican states. *International Journal of Educational Development*, *32*(1), 145–154. https://doi.org/10.1016/j.ijedudev.2010.12.001

Luschei, T. F., Chudgar, A., & Rew, J. W. (2013). Exploring differences in the distribution of teacher qualifications across Mexico and South Korea: Evidence from the Teaching and Learning International Survey. *Teachers College Record*, *115*(May 2013), 1–38.

Mack, D. A., Macik-Frey, M., Quick, J. C., Shinoda, P., Cooper, C. L., & Keller, N. (2010). Early interdependent attachments: The power of a secure base. In *Early development and leadership: Building the next generation of leaders.* (pp. 135–158). https://doi.org/10.4324/9780203818343

Marshall-Mies, J. C., Fleishman, E. A., Martin, J. A., Zaccaro, S. J., Baughman, W. A., & McGee, M. L. (2000). Development and evaluation of cognitive and metacognitive measures for predicting leadership potential. *Leadership Quarterly*, *11*(1), 135–153. https://doi.org/10.1016/S1048-9843(99)00046-6

Matthews, D. J., & Foster, J. F. (2006). Mystery to mastery: Shifting paradigms in gifted education. *Roeper Review*, *28*(2), 64–69. https://doi.org/10.1080/02783190609554340

McCauley, C. D., Van Velsor, E., & Ruderman, M. N. (2010). The center for creative leadership handbook of leadership development. In V. E. Van, C. D. McCauley, & M. N. Ruderman (Eds.), *The center for creative leadership handbook of leadership development* (3rd ed.). San Francisco, CA: John Wiley & Sons, Inc.

McCullough, P. M., Ashbridge, D., & Pegg, R. (1994). The effect of self-esteem, family structure, locus of control, and career goals on adolescent leadership behavior. *Adolescence*, *29*(115), 605–611.

McKinsey Global Institute. (2012). *The archipelago economy: Unleashing Indonesia's potential*. Washington, DC.: McKinsey Global Institute.

Merton, R. K. (1968). The matthew effect in science. *Science*, *159*(3810), 56–63.

Mitra, D. (2006). Increasing student voice and moving toward youth leadership. *The Prevention Researcher*, 7–10.

Moegiadi, J. (1994). Indonesia: System of education. In T. Husén & T. N. Postlethwaite (Eds.), *International Encyclopedia of Education* (2nd ed., pp. 2784–2792). Oxford, UK: Pergamon Press.

Mumford, M. D., Zaccaro, S. J., Connelly, M. S., & Marks, M. A. (2000). Leadership skills. *The Leadership Quarterly*, *11*(1), 155–170. https://doi.org/10.1016/S1048-9843(99)00047-8

Murphy, S. E. (2010). Providing a foundation for leadership development. In *Early development and leadership: Building the next generation of leaders* (pp. 3–38).

Murphy, S. E., & Johnson, S. K. (2011). The benefits of a long-lens approach to leader development: Understanding the seeds of leadership. *Leadership Quarterly*, *22*(3), 459–470. https://doi.org/10.1016/j.leaqua.2011.04.004

Neisser, U., Boodoo, G., Bouchard Jr., T. J., Boykin, A. W., Brody, N., Ceci, S. J., … Urbina, S. (1996). Intelligence: Knowns and unknowns. *American Psychologist1*, *51*(2), 77–101.

Nettles, M. T., & Millett, C. M. (2006). *Three magic letters: Getting to Ph.D.* Baltimore, MD: Johns Hopkins University Press.

Noe, R. A., Greenberger, D. B., & Wang, S. (2002). Mentoring: What we know and where we

might go. *Research in Personnel and Human Resources Management*, *21*, 129–173.

Nora, A., & Crisp, G. (2007). Conceptualizing and validating the multi-dimensions of a support system. *Journal of College Student Retention: Research, Theory, and Practice*, *9*, 337–356.

Northouse, P. G. (2007). *Leadership: Theory and Practice*. Thousand Oaks, CA: Sage Publications, Inc.

O'Toole, J. (2001). When leadership is an organizational trait. In W. Bennis, G. M. Spreitzer, & T. G. Cummings (Eds.), *The future of leadership* (pp. 158–174). San Francisco, CA: Jossey-Bass.

Olszewski-Kubilius, P., Subotnik, R. F., Davis, L. C., & Worrell, F. C. (2019). Benchmarking psychosocial skills important for talent development. In R. F. Subotnik, S. Assouline, P. Olszewski-Kubilius, H. Stoeger, & A. Ziegler (Eds.), *The Future of Research in Talent Development: Promising Trends, Evidence, and Implications of Innovative Scholarship for Policy and Practice. New Directions for Child and Adolescent Development* (pp. 161–176). https://doi.org/10.1002/cad.20318

Ommundsen, Y. (2001). Students' implicit theories of ability in physical education classes: The influence of motivational aspects of the learning environment. *Learning Environments Research*, *4*, 139–158. https://doi.org/10.1023/A:1012495615828

Organization for Economic Cooperation and Development [OECD]. (2012). *Are students more engaged when schools offer extracurricular activites*. *PISA in Focus* (Vol. 07). Paris, France. https://doi.org/10.1787/5k961l4ccczt-en

Organization for Economic Cooperation and Development [OECD]. (2016). *Does it matter how much time students spend on line outside of school? PISA in Focus* (Vol. 01). Paris, France.

Organization for Economic Cooperation and Development [OECD]. (2018). Online education

database. Retrieved from https://stats.oecd.org/Index.aspx

Paik, S. J. (2001). *Educational productivity in South Korea and the U.S. International Journal of Educational Research* (Vol. 35). https://doi.org/10.1016/S0883-0355(02)00014-9

Paik, S. J. (2004). Korean and US families, schools, and learning. *International Journal of Educational Research*, *41*(1 SPEC. ISS.), 71–90. https://doi.org/10.1016/j.ijer.2005.04.006

Paik, S. J. (2008). Altering the curriculum of the home: Learning environments for Korean and U.S. students. *Marriage & Family Review*, *43*(3–4), 289–307. https://doi.org/10.1080/01494920802072504

Paik, S. J. (2013). Nurturing talent, creativity, and productive giftedness: A new mastery model. In K. H. Kim, J. C. Kaufman, J. Baer, & B. Sriraman (Eds.), *Creatively gifted students are not like other gifted students* (pp. 101–119). Rotterdam, The Netherlands: Sense Publishers.

Paik, S. J. (2015). Educational productivity. In J. D. Wright (Ed.), *International encyclopedia of the social and behavioral sciences* (2nd ed., Vol. 7, pp. 272–278). Oxford, UK: Elsevier. https://doi.org/10.1007/s10531-013-0544-y

Paik, S. J., Choe, S. M. M., Otto, W. J., & Rahman, Z. (2018). Learning about the lives and early experiences of notable Asian American women: Productive giftedness, childhood traits, and supportive conditions. *Journal for the Education of the Gifted*, *41*(2), 160–192.

Paik, S. J., Gozali, C., & Marshall-Harper, K. R. (2019). Productive giftedness: A new mastery approach to understanding talent development. In R. F. Subotnik, S. Assouline, P. Olszewski-Kubilius, H. Stoeger, & A. Ziegler (Eds.), *The Future of Research in Talent Development: Promising Trends, Evidence, and Implications of Innovative Scholarship for Policy and Practice. New Directions for Child and Adolescent Development* (Vol. 168, pp. 1–29). https://doi.org/10.1002/cad

Paik, S. J., Marshall-Harper, K., Gozali, C., & Johnson, T. (2020). The life and success of Sonia Sotomayor: Perseverance and productive giftedness. In S. J. Paik (Ed.), *High-achieving Latino students: Successful pathways toward college & beyond*. Charlotte, NC: Information Age Publishing Inc.

Paik, S. J., & Walberg, H. J. (Eds.). (2007). *Narrowing the achievement gap: Strategies for educating Latino, Black, and Asian students*. New York, NY: Springer.

Paik, S. J., Wang, D., & Walberg, H. J. (2002). Timely improvements to learning. *Educational Horizons*, 69–71.

Passmore, J. (2015). *Leadership coaching: Working with leaders to develop elite performance*. London, England: Kogan Page.

Peterson, S. J., & Luthans, F. (2003). The positive impact and development of hopeful leaders. *Leadership & Organization Development Journal*, *24*(1), 26–31. https://doi.org/10.1108/01437730310457302

Petri, N. (2014). *Vertical leadership development—Part 1: Developing leader for a complex world*.

Pfeiffer, S. I., & Thompson, T. L. (2013). Creativity from a talent development perspective: How it can be cultivated in schools. In K. H. Kim, J. C. Kaufman, J. Baer, & B. Sriraman (Eds.), *Creatively gifted students are not like other gifted students* (pp. 231–255). Rotterdam, The Netherlands.

Pinker, S. (2003). *The blank slate: The modern denial of human nature*. New York, NY: Penguin.

Pleiss, M. K., & Feldhusen, J. F. (1995). Mentors, Role Models, and Heroes in the Lives of Gifted Children. *Educational Psychologist*, *30*(3), 159–169.

Popper, M. (2000). The development of charismatic leaders. *Political Psychology*, *21*(4), 729–744. https://doi.org/10.1111/0162-895X.00214

Popper, M. (2010). The development of “leaders in everyday life”: An attachment perspective. In *Early development and leadership: Building the next generation of leaders* (pp. 115–133). https://doi.org/10.4324/9780203818343

Popper, M., & Mayseless, O. (2003). Back to basics: Applying a parenting perspective to transformational leadership. *Leadership Quarterly*, *14*(1), 41–65. https://doi.org/10.1016/S1048-9843(02)00183-2

Popper, M., & Mayseless, O. (2007). The building blocks of leader development. *Leadership & Organization Development Journal*, *28*(7), 664–684. https://doi.org/10.1108/01437730710823905

Popper, M., Mayseless, O., & Castelnovo, O. (2000). Transformational leadership and attachment. *Leadership Quarterly*, *11*(2), 267–289.

Priest, K. L., Kliewer, B. W., Hornung, M., & Youngblood, R. J. (2018). The role of mentoring, coaching, and advising in developing leadership identity. *New Directions for Student Leadership*, *158*, 23–36. https://doi.org/10.1002/yd

Ramadhan, A. P. (2013). Teacher and health worker absence in Indonesia. *Asian Education and Development Studies*, *2*(2), 149–161.

Ramey, H. L., & Rose-Krasnor, L. (2012). Contexts of structured youth activities and positive youth development. *Child Development Perspectives*, *6*(1), 85–91. https://doi.org/10.1111/j.1750-8606.2011.00219.x

Recchia, S. L. (2010). Preschool leaders in the early childhood classroom. In *Early development and leadership: Building the next generation of leaders* (pp. 39–58).

Redding, S. (2003). *Parents and learning*. International Academy of Education; International Bureau of Education.

Reichard, R. J., & Paik, S. J. (2010). Developing the next generation of leaders: Research, policy, and practice. In *Early development and leadership: Building the next generation of leaders* (pp. 309–328).

Reichard, R. J., Riggio, R. E., Guerin, D. W., Oliver, P. H., Gottfried, A. W., & Gottfried, A. E. (2011). A longitudinal analysis of relationships between adolescent personality and intelligence with adult leader emergence and transformational leadership. *Leadership Quarterly*, *22*(3), 471–481. https://doi.org/10.1016/j.leaqua.2011.04.005

Rhodes, J. (2002). *Stand by me: The risks and rewards of mentoring today's youth*. Cambridge, MA: Harvard University Press.

Riggio, R. E., Riggio, H. R., Salinas, C., & Cole, E. J. (2003). The role of social and emotional communication skills in leader emergence and effectiveness. *Group Dynamics: Theory, Research, and Practice*, *7*(2), 83–103. https://doi.org/10.1037/1089-2699.7.2.83

Right Management. (2013). Talent management challenges in an era of uncertainty.

Robinson, K. (2009). *The element: How finding your passion changes everything*. New York, NY: Penguin Books.

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. New York, NY: Holt, Rinehart and Winston.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, *80*(1), 1–28.

Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, *72*(4), 1135–1150.

Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, *25*, 54–67. https://doi.org/10.1006/ceps.1999.1020

Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*, 68–78.

Sanchez, B., Colon-Torres, Y., Feuer, R., Roundfield, K. E., & Berardi, L. (2005). Race, ethnicity, and culture in mentoring relationships. In D. L. DuBois & M. J. Karcher (Eds.), *Handbook of Youth Mentoring*. Thousand Oaks, CA: SAGE Publications, Inc.

Scheerens, J. (2014). Relevance of findings for educational policy and future research. In J. Scheerens (Ed.), *Effectiveness of time investments in education: Insights from a review and meta-analyses* (pp. 143–157). The Netherlands: Springer. https://doi.org/10.1007/978-3-319-00924-7

Schneider, B., Paul, M. C., White, S. S., & Holcombe, K. M. (1999). Understanding high school student leaders, I: Predicting teacher rating of leader behaviour. *Leadership Quarterly*, *10*(4), 609–636. https://doi.org/10.1016/S1048-9843(99)00038-7

School-Family Partnerships. (2017).

Shahid, S. (2015). Outlook on the Global Agenda 2015: 3. Lack of leadership".

Shalka, T. R. (2016). The impact of mentorship on leadership development outcomes of international students. *Journal of Diversity in Higher Education*, *10*(2), 136–148.

Shernoff, D. J., & Hoogstra, L. (2001). Continuing motivation beyond the high school classroom. *New Directions for Child and Adolescent Development*, (93), 73–87. https://doi.org/10.1002/cd.26

Simon, B. S., & Epstein, J. (2001). School, family, and community partnerships: Linking theory

to practices. In *Promising practices for family involvement in schools* (pp. 1–24). Greenwich, CN: Greenwich, CN.

Simonton, D. K. (2006). Presidential IQ, openness, intellectual brilliance, and leadership: Estimates and correlations for 42 U.S. chief executives. *Political Psychology*, *27*(4), 511–526. https://doi.org/10.1111/j.1467-9221.2006.00524.x

Snyder, J., Horsch, E., & Childs, J. (1997). Peer relationships of young children: Affiliative choices and the shaping of aggressive behavior. *Journal of Clinical Child Psychology*, *26*(2), 145–156. https://doi.org/10.1207/s15374424jccp2602_3

Sosniak, L. A., & Gabelko, N. H. (2008). *Every child's right: Academic talent development by choice, not chance*. New York, NY: Teachers College Press.

Spencer, R. (2006). Understanding the mentoring process between adolescents and adults. *Youth & Society*, *37*(3), 287–315. https://doi.org/10.1177/0743558405278263

Sternberg, R. J. (2010). The purpose of college education: Producing a new generation of positive leaders. In *Early development and leadership: Building the next generation of leaders* (pp. 293–308).

Stevenson, H. W., & Stigler, J. W. (1994). *The learning gap: Why our schools are failing and what we can learn from Japanese and Chinese education*. Simon & Schuster. https://doi.org/10.2307/2074400

Strang, S. E., & Kuhnert, K. W. (2009). Personality and leadership developmental levels as predictors of leader performance. *Leadership Quarterly*, *20*(3), 421–433. https://doi.org/10.1016/j.leaqua.2009.03.009

Subotnik, R. F., & White, G. (2006). The Other 3 Rs: Implications for the design of learning environments, research, and policy. In R. J. Sternberg & R. F. Subotnik (Eds.), *Optimizing*

student success in school with the other three Rs: Reasoning, resilience, and responsibility. Greenwich, CN: Information Age Publishing Inc.

Tableman, B. (2004). *School climate and learning*. *Best Practice Briefs* (Vol. 1). East Lansing, MI: Michigan State University. https://doi.org/10.1080/0260136820020105

Thapa, A., Cohen, J., Guffey, S., & Higgins-D 'alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, *83*(3), 357–385. https://doi.org/10.3102/0034654313483907

The World Bank. (2019). The World Bank Open Data. Retrieved from https://data.worldbank.org/?locations=ID-XN

Thompson, M. D. (2012). Gender differences among contributing leadership development resources. *Journal of College Student Development*, *53*, 472–476.

Thoonen, E., Sleegers, P., Oort, F., Peetsma, T., & Geijsel, F. (2011). How to improve teaching practices: The role of teacher motivation, organizational factors, and leadership practices. *Educational Administration Quarterly*, *47*(3), 496–536. https://doi.org/10.1177/0013161X11400185

Tomlinson, H. B., & Andina, S. (2015). *Parenting education in Indonesia: Review and recommendations to strengthen programs and systems*. Washington, DC.: The World Bank.

Tough, P. (2012). *How children succeed: Grit, curiosity, and the hidden power of character*. New York, NY: Houghton Mifflin Harcourt Publishing Company.

Towler, A. (2005). Charismatic leadership development: Role of parental attachment style and parental psychological control. *Journal of Leadership and Organizational Studies*, *11*(4), 15–25.

Van Velsor, E., & McCauley, C. D. (2004). Our view of leadership development. In C. D.

McCauley & E. Van Velsor (Eds.), *The center for creative leadership handbook of leadership development* (pp. 1–22). San Francisco, CA: Jossey-Bass.

VanTassel-Baska, J. (1998). The development of academic talent: A mandate for educational best practice. *Phi Delta Kappan*, *79*(10), 760–763.

Walberg, H. J. (1984a). Families as partners in educational productivity. *Phi Delta Kappan*, *65*(6), 397–400.

Walberg, H. J. (1984b). Improving the productivity of America's schools: Syntheses of thousands of research studies show the power of nine factors influencing learning. *Educational Leadership*, *41*(8), 19–27.

Walberg, H. J. (1988). Synthesis of research on time and learning. *Educational Leadership*, *45*(6), 76.

Walberg, H. J., & Anderson, G. J. (1968). Classroom climate and individual learning. *Journal of Educational Psychology*, *59*(6, Pt.1), 414–419. https://doi.org/10.1037/h0026490

Walberg, H. J., & Greenberg, R. C. (1997). Using the Learning Environment Inventory. *Social and Emotional Learning*, *54*(8), 45–46.

Walberg, H. J., Niemiec, R. P., & Fredrick, W. C. (1994). Productive curriculum time. *Peabody Journal of Education*, *69*(3), 86–100.

Walberg, H. J., & Paik, S. J. (1997). Home environments for learning. *Psychology and Educational Practice*, 356–368.

Walberg, H. J., & Tsai, S.-L. (1983). Matthew effects in education. *American Educational Research Journal*, *20*(3), 359–373. https://doi.org/10.3102/00028312020003359

Walker, S. (2009). Sociometric stability and the behavioral correlates of peer acceptance in early childhood. *The Journal of Genetic Psychology2*, *170*(4), 339–358.

Wallace, J. M. (2006). *The relationship of leadership behaviors with follower performance: A study of alternative schools*. Ph.D. Dissertation Regent University, August 22, 2006.

Widyastuti, R. (2012). Pengerahan Tenaga Mahasiswa (1951-1962). Retrieved from http://imbeta.ui.co.id/kabar-terbaru/pengerahan-tenaga-mahasiswa

Zarrett, N., & Lerner, R. M. (2008). Ways to promote the positive development of children and youth. *Child Trends*, 1–5. https://doi.org/10.1037/e456902008-001

Zenger, J. (2012). We wait too long to train our leaders. *Harvard Business Review*.

Zevalkink, J., Riksen-walraven, J. M., & Bradley, R. H. (2008). The quality of children's home environment and attachment security in Indonesia. *The Journal of Genetic Psychology*, *169*(1), 72–91.

Zimmer, R., & Attridge, J. (2014). Peer effects. In D. J. Brewer & L. O. Picus (Eds.), *Encyclopedia of education economics and finance* (pp. 522–525). Thousand Oaks, CA: SAGE Publications.

Appendix A

Indonesia Mengajar Recruitment Overview

Phase 1 – Online Questionnaire

Interested applicants first completes an online questionnaire consisting of six parts: basic information, contact information, education, organizational participation, essay, and reference (refer to Appendix X for questionnaire items). This questionnaire was developed by an external assessor. All items, except for the essay questions, are scored automatically using pre-determined weights. The ten essay questions are scored manually by trained volunteers, IM alumni, and staff. The essay questions were created using the behavioral-based interview method and focus mainly on a candidate's past experiences as an indicator of future success. Candidates are immediately disqualified from the process if they have not earned their bachelor's degree, are over 29 years old, are married, or have no organizational experience. Typically, about 14,000 begin the online application process each term, however, only about 30% to 40% complete the questionnaire and become eligible for selection. Between 200 to 300 candidates are then invited to continue to the next round of selection.

Phase 2 – Direct Assessment

The second phase of selection, which takes place in several locations around the country, consists of an in-person interview, focus group discussion, micro-teaching, an academic potential test, and a psychological assessment (the House-Tree-Person test). The two most important evaluation tools in this phase are the in-person interview and the focus group discussion. The remaining tools are used to gather supplementary information that may assist in understanding the candidate. In the micro-teaching element, for instance, candidates are asked to teach an assigned content and "students" (other candidates) attempt to mimic a real classroom situation by interrupting, providing comments, and asking questions. During the 7-min process, evaluators observe the candidate's reaction and interpersonal skills. Candidates are required to cover the costs of attendance on their own, and on average between thirty to forty invited individuals decline to participate. At the end of the direct assessment phase, candidates are ranked based on their overall scores.

Phase 3 – Reference Check

In the third phase of selection, candidates' references, which may include previous employers, supervisors, or faculty) are contacted to clarify questions the recruitment team may have. At this point, ranked candidates may still choose to resign from the program. The main reason for resignation at this phase is usually parental permission.

Phase 4 – Medical Check-up

In the final phase, candidates are required to undergo a medical examination to ensure that they are suited for the physically intensity of their assignments. Candidates who pass the medical check-up will then be asked to sign a contract with IM.

Phase 5 – Training

Selected candidates undergo a 7-week training program before deployment. In addition to pedagogical theory and practice, candidates are trained in other essential skills needed for their one-year deployment (Indonesia Mengajar, 2016). These include training in physical and mental endurance, creativity, leadership, problem-solving, adaptation, advocacy, and health and safety (Indonesia Mengajar, 2015b). IM maintains the view that the source of knowledge and skill lies within each young teacher, and as such, the organization's role is to facilitate (rather than direct) their leadership development. In order to build individuals' leadership capacities, IM focuses on strengthening study skills and reflection, providing case studies to learn from, and providing a mentor or facilitator (Indonesia Mengajar, 2016). On rare occasions, individuals have resigned in the training phase, typically due to health issues uncovered during the high-intensity physical training.

Appendix B

Leadership Competencies for Young Teachers
Indonesia Mengajar Movement Organization

Translated from the Program Pengiriman Pengajar Muda Handbook (Indonesia Mengajar)
Note: The Leadership competencies were in English and definitions and main behaviors were in Bahasa

Leadership Competency	Definition	Main Behaviors
Initiating action	The ability to act with initiative towards a goal; proactive behavior	• Responds quickly • Acts independently • Does more than required / goes the extra mile
Tenacity	The ability to remain focus and persevere towards a goal	• Tries repeatedly • Re-focuses towards a goal
Gaining commitment	The ability to garner others' commitment to a goal or strategy using interpersonal skills; The ability to adapt oneself to a task, situation, or others	• Starts a discussion • Explains current situation • Develops others' and own viewpoints • Facilitates agreement • Builds positive relationship with others
Analytical thinking	The ability to identify and understand issues, challenges, and opportunities; weigh and incorporate multiple sources of information; conceptualize effective strategies; base decisions on facts, limitations, and consequences	• Identifies issues, challenges, and opportunities • Gathers information • Translates information • Summarizes choices • Chooses the best course of action
Adaptability	The ability to maintain effectiveness despite significant change on the environment and responsibilities; adjust oneself to fit into the new structure, process, and work culture	• Attempts to understand changes • Views change as something positive • Adapts behavior
Planning and organizing	The ability to delegate tasks and responsibilities for self and others to achieve a goal	• Prioritizes • Decides on task and resources needed • Creates a schedule • Utilizes resources efficiently • Remains focused
Work standards	The ability to set high performance standards for self and others; accept responsibility for accomplishing tasks; maintain a strong work ethic	• Sets high quality standards • Ensures high quality work • Accepts responsibility • Encourages others to be responsible
Continuous learning	The ability to recognize new learning opportunities; regularly takes time to study; utilizes new knowledge and skills	• Possesses a desire to set learning goals • Actively seeks learning opportunities • Maximizes learning • Applies new skills and knowledge • Takes risks in learning
Communication	The ability to convey information and ideas clearly using a variety of means in individual or group settings; garner others' participation by helping them comprehend and remember the message being conveyed	• Understands communication from others • Maintains listeners' attention • Ensures comprehension

Impact	The ability to create a positive first impression; conveys attention and appreciation; demonstrates a sense of confidence	• Acts professionally • Speaks with confidence
Building positive working relationships	The ability to develop and utilize collaborative relationships to achieve goals	• Finds opportunities • Clarifies current situation • Develops others' and own ideas • Does not put personal goals first • Facilitates agreement
Facilitating	The ability to encourage others to find creative and innovative approaches to challenges and opportunities; facilitates implementation and change in the work place	• Assists in pushing boundaries • Appreciates a variety of approaches • Acknowledges change • Resolves rejection of change • Manages complexities and change
Coaching	The ability to guide and encourage others; provide feedback; motivate others to achieve goals and solve problems	• Clarifies current situation • Explains and demonstrates • Provides feedback and encouragement

Appendix C

Informed Consent Form

AGREEMENT TO PARTICIPATE IN
"FROM EARLY CHILDHOOD TO ADULTHOOD: LEADER DEVELOPMENT IN INDONESIA"

STUDY LEADERSHIP. You are invited to participate in a dissertation research project led by Charlina Gozali, a doctoral student in the School of Educational Studies at Claremont Graduate University, California, USA. The study is supervised by associate professor of education in the School of Educational Studies, Dr. Susan Paik.

PURPOSE. The purpose of this study is to examine the individual aptitude, school, and environmental factors in the early to later years that lead to the development of leadership competencies in Indonesian teacher leaders.

ELIGIBILITY. To be in this study, you must have completed your one-year teaching assignment with *Indonesia Mengajar*. Since the study will be conducted in English, you should also be comfortable communicating in English.

PARTICIPATION. You will be asked to complete an online survey and an in-person interview. Questions will pertain to your childhood, adolescent, and adulthood experiences, including experiences at home, schools, social settings, and others. The survey will take between 20 to 30 minutes, while the interview will take between one to two hours on average. With your consent, the researcher may also contact you via email or telephone to ask clarifying questions after the interview.

RISKS OF PARTICIPATION. The risks that you run by taking part in this study are minimal and no more than what you would experience in daily life. The risks include possible discomfort during the interview process, to the extent that answering questions about your life experiences may cause you some unease. Your real name will never be used in the study, however, we cannot guarantee anonymity as lists of *Indonesia Mengajar* alumni are publicly available.

BENEFITS OF PARTICIPATION. This study is intended to benefit future generations of Indonesians by identifying factors that support the development of leadership competencies. Furthermore, due to the high-achieving nature of participants in the study, findings from the study can also inform parents, teachers, policy makers, and other adults on ways to nurture talent and potential of Indonesian children.

VOLUNTARY PARTICIPATION. Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time or refuse to answer any question for any reason without it being held against you. Your decision to participate (or not participate) will have no bearing on your current or future connection with *Indonesia Mengajar.*

CONFIDENTIALITY. Your individual privacy will be protected in publications or presentations resulting from this study. Your real names will never be used in any written materials. All audio recordings and survey responses will be kept in a password-protected laptop in the possession of the researcher. All files associated with the study will be permanently destroyed five years after the data collection process is completed.

FURTHER INFORMATION. If you have any questions or would like additional information about this study, please contact Charlina Gozali at leaderstudyindonesia@gmail.com. You may also contact my faculty advisor, Dr. Susan Paik, at susan.paik@cgu.edu. The CGU Institutional Review Board, which is administered through the Office of Research and Sponsored Programs (ORSP), has reviewed this project. You may also contact ORSP at +1(909)607-9406 with any questions.

CONSENT. If you fit the eligibility requirements and voluntarily consent to participate in this research, please click "I consent" on the survey. Otherwise, click "I do not consent" to leave the survey.

Appendix D

Author permission was granted to use the following:

PGM Interview Protocol (Sample Items)

Source: Paik, S. J. (forthcoming). Productive Giftedness Model Manual and Instruments. In S. J. Paik, *Nurturing Productive Giftedness*. Cambridge, UK: Cambridge University Press.

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PRODUCTIVE GIFTEDNESS MODEL (PGM) – INTERVIEW PROTOCOL INDONESIAN LEADER VERSION (Sample Items)

Please take your time to reflect on each question. Some questions will ask you to think about your past experiences.

Leader Identification & Mastery

P1.2_D-QT-A_Talent-ID-mastery	Tell me about how you first discovered your leadership. (Indo) (a) How old were you? (b) How did you discover you had leadership ability? (c) Who played a role in helping you to discover your leadership?
P1.3_D-QT_Talent-ID-mastery	Tell me when you started to develop your leadership skills. (Indo) (a) How many years did it take you to feel like you were an established leader? (b) At what point did you start to develop your own style of leadership?

Home Life

P3.3_H_Home-life	Tell me about your home life growing up. (a) How would you describe your home life? (b) If any, what duties or responsibilities did you have at home? (c) What family values were emphasized or taught in your home?

Formal Schooling Experiences

P4.1_QI_Early-schooling	Looking back at your preschool to high school education, (a) Do you feel that you received a good education from preschool to high school? (b) Why?
P4.2_QI-LC_Early-schooling	Tell me about those schools (preschool to high school education). (a) In what ways did the schools provide a supportive learning environment? (b) Did your schools set high expectations? (c) How so?

Motivation to Join IM

P11.1_PQ-MO_IM-motivation	Why did you join Indonesia Mengajar?

Indonesia Mengajar Experience

P11.2_PQ_IM-experience	Tell me about your experience as a young teacher (*pengajar muda*). (a) How did it influence your leadership? (b) Who influenced you the most? (c) And why? (d) What three things did you learn?

Appendix E

Author permission was granted to use the following:

PGM Demographic Survey & PGM Factor Survey (Sample Items)

Source: Paik, S. J. (forthcoming). Productive Giftedness Model Manual and Instruments. In S. J. Paik, *Nurturing Productive Giftedness*. Cambridge, UK: Cambridge University Press.

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PRODUCTIVE GIFTEDNESS MODEL (PGM) – DEMOGRAPHIC SURVEY INDONESIAN LEADER VERSION (Sample Items)

SECTION D1: EDUCATIONAL BACKGROUND (PRE-KINDERGARTEN)

D1.1_ ED_QT Did you attend preschool (PAUD, starting as early as age 2 to 5)?
- Yes
- No

SECTION D2: EDUCATIONAL BACKGROUND AND ABILITY (ELEMENTARY)

The following questions pertain to the school you attended for most of your elementary school years (SD/MI).

D2.1a_ ED_QI-A_Indo What type of elementary school (SD/MI) did you attend or ***mostly*** attend?
- Public general elementary school (SD negeri)
- Private general elementary school (SD swasta)
- Public madrasah (MI negeri)
- Private madrasah (MI swasta)
- Other (e.g., homeschool, etc.)

D2.1b_ED_QI-A_Indo Was your elementary school (SD/MI) considered a top-ranking school in your area (i.e. sekolah favorit kota/kabupaten)?
- Yes
- No

D2.3_ED_A What kinds of grades (or equivalent) did you ***mostly*** receive in your elementary school years (SD/MI)?
- A (i.e., 91-100)
- B (i.e., 71-90)
- C (i.e., 51-70)
- D or lower (i.e., <51)
- My school did not give grades

NOTE: These questions are replicated at secondary, undergraduate, and graduate levels.
From the original survey, the Professional Section 6 (under Graduate sections) was omitted from this survey.

SECTION D8: CHILDHOOD FAMILY BACKGROUND

**Sections D8 and D9 will appear after the PGM Factor Survey in the online version given to participants*

The following questions pertain to your family characteristics during childhood.

D8.2_FB_H-CF_Indo What was your **father's** highest level of education attained?
- Doctoral degree (i.e., S3/doktor)
- Master's degree (i.e., S2/spesialis/magister)
- Bachelor's degree (i.e., S1/D4/D3)
- Associate degree (i.e., D2/D1)
- Trade/technical/vocational training
- Some college credit, no degree
- High school graduate, diploma or equivalent
- Some schooling completed
- No schooling completed
- Not applicable/ unknown

D8.3_FB_H-CF_Indo What was your **mother's** highest level of education attained?
- Doctoral degree (i.e., S3/doktor)
- Master's degree (i.e., S2/spesialis/magister)
- Bachelor's degree (i.e., S1/D4/D3)
- Associate degree (i.e., D2/D1)

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- Trade/technical/vocational training
- Some college credit, no degree
- High school graduate, diploma or equivalent
- Some schooling completed
- No schooling completed
- Not applicable/ unknown

D8.5_FB_H-CF_Indo Growing up, how would you ***mostly*** describe your family's religious affiliation or tradition?
- Buddhist
- Christian Protestant
- Hindu
- Muslim
- Roman Catholic
- Other
- None

SECTION D9: PARTICIPANT INFORMATION

D9.4_PI_CF_Indo Choose one or more ethnic groups that best describe you:
- Javanese
- Sundanese
- Malay
- Batak
- Chinese
- Other (please specify) ________________________

D9.5_PI_CF_Indo What is your gender?
- Male
- Female

D9.6_PI_CF_Indo What is your religious affiliation?
- Buddhist
- Christian Protestant
- Hindu
- Muslim
- Roman Catholic
- Other
- None

D9.7_PI_QT-QI_Indo What is the highest level of education you attained?
- Doctoral degree (i.e., S3/doktor)
- Master's degree (i.e., S2/spesialis/magister)
- Bachelor's degree (i.e., S1/D4/D3)
- Associate degree (i.e., D2/D1)
- Trade/technical/vocational training
- Some college credit, no degree
- High school graduate, diploma or equivalent
- Some schooling completed
- No schooling completed

END OF DEMOGRAPHIC SURVEY – THANK YOU!

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PRODUCTIVE GIFTEDNESS MODEL (PGM) – FACTOR SURVEY INDONESIAN LEADER VERSION (Sample Items)

SECTION S1: OPPORTUNITIES, SUPPORT, & RESOURCES

The following questions pertain to experiences related to your leadership during childhood.

S1.2_H-CF Growing up, how often did these happen for you?

	Never	Rarely	Sometimes	Often	Very Often
Access to opportunities related to leadership					
Access to influential people related to leadership					
Access to resources related to leadership					

Note: Questions are repeated for leadership now.

SECTION S2: EXTRACURRICULAR TIME & QUANTITY OF INSTRUCTION (ELEMENTARY)

The following questions pertain to your elementary school years (SD/MI).

S2.2_ET ***On average***, how much time did you spend in each of these activities ***per week*** during your elementary school years (SD/MI)? Please check the appropriate option for each activity.

	None	0 to 1 hours	2 to 3 hours	4 to 5 hours	More than 5 hours
Academic clubs/activities					
Community service clubs/activities					
Religious clubs/activities					
Other Activities					

To the best of your recollection, please answer the following questions regarding the time you spent developing your leadership in your elementary school years (SD/MI).

S2.5_QT-ET ***On average***, how many hours did you spend developing your leadership ***per day*** (i.e., activities that involve the exercise of your leadership skills such as organizational memberships, involvement in committees, event planning, managing projects, and any other leadership opportunities)?

S2.6_QT-ET ***On average***, how many hours did you spend in leadership-related training or instruction ***per week*** (i.e., activities, programs, workshops, or conferences related to leadership skills)?

S2.7_QT-ET ***On average***, how many times ***per year*** did you participate in competitions, presentations, or other events that demonstrated or acknowledged your leadership?

Note: These questions are replicated at secondary, undergraduate, graduate, and professional levels.

Appendix F

Basic Demographic Survey

1. What is your name?

   ____

2. What is your year of birth?
   Drop down menu: 1970 - 2000

3. What is your gender?
   - Male
   - Female

4. Which batch of *Indonesia Mengajar* were you a part of?
   Drop down menu:
   - I
   - II
   - III
   - IV
   - V
   - VI
   - VII
   - VIII
   - VIIII
   - X
   - XI
   - XII
   - XIII
   - XIV
   - XV
   - XVI
   - XVII
   - XVIII

5. Are you willing to be interviewed in English?
   - Yes
   - No

6. Are you willing to complete an online survey in English?
   - Yes
   - No

Display only if YES to Q5 and Q6

7. Email address:

   ____

Display only if YES to Q5 and Q6

8. Whatsapp/mobile number:

   ____

Display only if YES to Q5 and Q6

9. Please select your preferred method of communication (check all that apply):

- Email
- Whatsapp
- Phone call

Appendix G

Recruitment Email

Hello,

My name is Charlina Gozali and I am a doctoral student in the School of Educational Studies at Claremont Graduate University, California. You are receiving this email because you have indicated that you are interested in participating in my dissertation study, *From Early Childhood to Adulthood: Leader Development in Indonesia*. As an alumni of *Indonesia Mengajar*, you are considered a high-achieving individual with visible demonstrations and evidence of leadership capabilities. My study aims to identify how different factors (e.g., home environment, school, peers, mentors) influence the development of leadership competencies in high-achieving Indonesians. My hope is that findings from this study can help guide parents, teachers, policy makers, and other adults in creating environments that support the development of leadership competencies in Indonesia's next generation of leaders.

Participation in this study involves three steps on your part:

1) **Review the attached informed consent form.** The form provides details about the study, your rights as a participant, and the researcher's contact information for further questions.

2) **Complete an online survey.** The survey consists of basic demographic questions and leader development-related questions such as educational history, family background and characteristics, and extracurricular time use. The survey will take between 20 to 30 minutes to complete and must be completed at least **five days** before your scheduled interview date.

   If you are interested in participating in this study,
   Please click HERE to begin the survey.

3) **Complete an individual in-person/video interview.** The purpose of the interview is to learn more about how you developed your leadership over the years. Questions pertain to your educational experiences, family and home life, mentors, and other important life events. The interview should take between one to two hours to complete. With your consent, interviews will be audio-recorded. Depending on your location and availability, the interview may also be conducted through *Zoom*, *Skype* or *Facetime*.

   Please click on the following link to schedule your interview time slot:
   https://calendly.com/leader-study-indonesia/interview

   If you cannot find a suitable time slot or location, please send me an email directly.

Finally, I would like to assure you that maintaining your confidentiality is important to me. A detailed explanation of how your responses will be safe-guarded is provided in the attached informed consent form. Participation is completely voluntary and will have no bearing on your relationship with *Indonesia Mengajar.*

If you have any additional questions about the study, please contact me at leaderstudyindonesia@gmail.com . I would be delighted to answer any questions you might have.

Thank you very much for your time, attention, and willingness to participate in this study.

Sincerely,

Charlina Gozali

Appendix H

Additional Data

Table H1

Access to Opportunities, Support, and Resources (Full Results) (N=38)

	Frequency (percentage)				
	Never	**Rarely**	**Sometimes**	**Often**	**Very Often**
Growing up, how often did these happen for you?					
Access to opportunities related to leadership	10 (26.3)	10 (26.3)	7 (18.4)	9 (23.7)	2 (5.3)
Access to influential people related to leadership	9 (23.7)	13 (34.2)	9 (23.7)	7 (18.4)	0
Access to resources related to leadership	6 (15.8)	9 (23.7)	10 (26.3)	12 (31.6)	1 (2.6)
How often did these happen for you now?					
Access to opportunities related to leadership	1 (2.6)	1 (2.6)	6 (15.8)	23	7 (18.4)
Access to influential people related to leadership	1 (2.6)	0	8 (21.1)	18 (47.4)	11 (28.9)
Access to resources related to leadership	0	0	3 (7.9)	17 (44.7)	18 (47.4)

Table H2

Extracurricular Time Use – Elementary (N=38)

	Percentage of Sample				
	None	**0 to 1 hours**	**2 to 3 hours**	**4 to 5 hours**	**> 5 hours**
Daily activities					
Homework or studying	0	55.3*	28.9	7.9	7.9
Reading (leisure)	5.3	57.9*	31.6	2.6	2.6
Spending time with friends	2.6	26.3	50.0*	13.2	7.9
Spending time with family	0	13.2	50.0*	21.1	15.8
Watching TV (educational)	13.2	65.8*	18.4	0	2.6

	None	0 to 1 hours	2 to 3 hours	4 to 5 hours	> 5 hours
Watching TV (leisure)	.0	47.4*	42.1	5.3	5.3
Technology (educational)	52.6*	36.8	7.9	0	2.6
Technology (leisure)	47.4*	28.9	21.1	0	2.6
Weekly activities					
Academic clubs/activities	31.6*	28.9	21.1	10.5	7.9
Community service clubs/activities	52.6*	28.9	13.2	5.3	0
Religious clubs/activities	26.3*	13.2	23.7	15.8	21.1
Hobby & special interest clubs/activities	52.6*	21.1	15.8	7.9	2.6
Sports & fitness clubs/activities	52.6*	21.1	18.4	2.6	5.3
Student leadership clubs/activities	57.9*	26.3	7.9	5.3	2.6
Visual & performing arts clubs/activities	50.0*	31.6	15.8	2.6	0

Note. * *mode*

Table H3

Extracurricular Time Use – Secondary (N=38)

	Percentage of Sample				
	None	**0 to 1 hours**	**2 to 3 hours**	**4 to 5 hours**	**> 5 hours**
Daily activities					
Homework or studying	.0	28.9	36.8*	18.4	15.8
Reading (leisure)	.0	42.1*	42.1*	13.2	2.6
Spending time with friends	.0	28.9	50.0*	7.9	13.2
Spending time with family	.0	18.4	63.2*	5.3	13.2
Watching TV (educational)	18.4	60.5*	18.4	2.6	.0
Watching TV (leisure)	7.9	47.4*	34.2	10.5	.0
Technology (educational)	21.1	57.9*	18.4	.0	2.6
Technology (leisure)	21.1	50.0*	23.7	2.6	2.6
Weekly activities					
Academic clubs/activities	10.5	21.1	36.8*	18.4	13.2
Community service clubs/activities	39.5*	15.8	23.7	13.2	7.9
Religious clubs/activities	31.6*	21.1	28.9	13.2	5.3
Hobby & special interest clubs/activities	34.2*	21.1	23.7	15.8	5.3
Sports & fitness clubs/activities	55.3*	18.4	18.4	5.3	2.6
Student leadership clubs/activities	18.4	15.8	31.6*	18.4	15.8

Visual & performing arts clubs/activities	57.9*	10.5	21.1	.0	10.5

*Note. * mode*

Table H4

Extracurricular Time Use – Undergraduate (N=38)

	Percentage of Sample				
	None	**0 to 1 hours**	**2 to 3 hours**	**4 to 5 hours**	**> 5 hours**
Daily activities					
Homework or studying	2.6	2.6	28.9	31.6	34.2*
Reading (leisure)	.0	36.8*	34.2	21.1	7.9
Spending time with friends	.0	18.4	55.3*	15.8	10.5
Spending time with family	18.4	50.0*	26.3	2.6	2.6
Watching TV (educational)	44.7	50.0*	5.3	.0	.0
Watching TV (leisure)	28.9	55.3	13.2	2.6	.0
Technology (educational)	7.9	23.7	47.4*	13.2	7.9
Technology (leisure)	5.3	39.5*	39.5*	10.5	5.3
Weekly activities					
Academic clubs/activities	26.3	18.4	28.9*	7.9	18.4
Community service clubs/activities	23.7	15.8	28.9*	7.9	23.7
Religious clubs/activities	36.8*	36.8*	13.2	5.3	7.9
Hobby & special interest clubs/activities	18.4	26.3	28.9*	15.8	10.5
Sports & fitness clubs/activities	57.9*	21.1	10.5	10.5	.0
Student leadership clubs/activities	15.8	10.5	15.8	23.7	34.2*
Visual & performing arts clubs/activities	57.9*	23.7	2.6	7.9	7.9
Vocational & professional clubs/activities	57.9*	18.4	15.8	2.6	5.3

*Note. * mode*

Table H5

Extracurricular Time Use – Graduate (n=16)

	Percentage of Graduate School Attendees

	None	0 to 1 hours	2 to 3 hours	4 to 5 hours	> 5 hours
Daily activities					
Homework or studying	.0	.0	18.8	25.0	56.3*
Reading (leisure)	6.3	50.0*	37.5	.0	6.3
Spending time with friends	6.3	37.5	50.0*	6.3	.0
Spending time with family	50.0*	37.5	.0	6.3	6.3
Watching TV (educational)	50.0*	31.3	18.8	.0	.0
Watching TV (leisure)	37.5	50.0*	12.5	.0	.0
Technology (educational)	.0	18.8	50.0*	25.0	6.3
Technology (leisure)	.0	18.8	56.3*	12.5	12.5
Weekly activities					
Academic clubs/activities	37.5*	12.5	25.0	.0	25.0
Community service clubs/activities	37.5*	12.5	18.8	.0	31.3
Religious clubs/activities	43.8*	18.8	12.5	6.3	18.8
Hobby & special interest clubs/activities	18.8	31.3*	25.0	12.5	12.5
Sports & fitness clubs/activities	43.8*	18.8	25.0	.0	12.5
Student leadership clubs/activities	31.3*	18.8	12.5	18.8	18.8
Visual & performing arts clubs/activities	50.0*	12.5	31.3	6.3	.0
Vocational & professional clubs/activities	50.0*	25.0	12.5	6.3	6.3

*Note. * mode*

Table H6

Extracurricular Time Use – Professional (N=38)

	Percentage of Sample				
	None	0 to 1 hours	2 to 3 hours	4 to 5 hours	> 5 hours
Daily activities					
Homework or studying	13.2	44.7*	39.5	.0	2.6
Reading (leisure)	7.9	55.3*	28.9	2.6	5.3
Spending time with friends	10.5	63.2*	21.1	2.6	2.6
Spending time with family	26.3	42.1*	18.4	5.3	7.9
Watching TV (educational)	63.2*	26.3	7.9	2.6	.0
Watching TV (leisure)	47.4*	44.7	7.9	.0	.0

Technology (educational)	13.2	36.8*	31.6	10.5	7.9
Technology (leisure)	13.2	28.9	36.8*	13.2	7.9
Weekly activities					
Community service clubs/activities	21.1	21.1	28.9*	13.2	15.8
Religious clubs/activities	57.9*	18.4	5.3	10.5	7.9
Hobby & special interest clubs/activities	39.5*	26.3	21.1	7.9	5.3
Sports & fitness clubs/activities	71.1*	10.5	13.2	2.6	2.6
Student leadership clubs/activities	42.1*	15.8	39.5	2.6	.0
Visual & performing arts clubs/activities	71.1*	15.8	7.9	2.6	2.6
Vocational & professional clubs/activities	55.3*	15.8	13.2	7.9	7.9

Note. * *mode*

Table H7

Hours Spent Sleeping, Working, and Developing Leadership – Elementary & Secondary (N=38)

Variable	**Elementary**		**Secondary**	
	Frequency	**%**	**Frequency**	**%**
How many hours did you spend sleeping per day?				
6 hours	*4*	*10.5*	12	31.6
7 hours	*6*	*15.8*	12	31.6
8 hours	*19**	*50.0**	14*	36.8*
9 hours	*9*	*23.7*	0	0
10 hours	*0*	*0*	0	0
How many hours did you spend working in a paid job per week?				
None	34*	89.5*	32*	84.2*
1 to 2 hours	1	2.6	2	5.3
3 to 4 hours	0	0	2	5.3
5 to 6 hours	0	0	0	0
More than 6 hours	3	7.9	2	5.3
How many hours did you spend working in a non-paid job per week?				
None	21*	55.3*	25*	65.8*
1 to 2 hours	9	23.7	6	15.8
3 to 4 hours	5	13.2	3	7.9
5 to 6 hours	2	5.3	1	2.6
More than 6 hours	1	2.6	3	7.9
How many hours did you spend developing your leadership per day?				
None	15	39.5	4	10.5

0 to 1 hour	17*	44.7*	18*	47.4*
2 to 3 hours	5	13.2	12	31.6
4 to 5 hours	0	0	3	7.9
More than 5 hours	1	2.6	1	2.6
How many hours did you spend in leadership-related training or instruction per week?				
None	19*	50.0*	9	23.7
1 to 5 hours	17	44.7	23*	60.5*
6 to 10 hours	2	5.3	2	5.3
11 to 15 hours	0	0	4	10.5
More than 15 hours	0	0	0	0
How many times per year did you participate in competitions, presentations, or other events that demonstrated or acknowledged your leadership?				
None	13	34.2	4	10.5
1 to 5 times	23*	60.5*	28*	73.7*
6 to 10 times	1	2.6	2	5.3
11 to 15 times	0	0	3	7.9
More than 15 times	1	2.6	1	2.6

Note. * mode

Table H8

Hours Spent Sleeping, Working, and Developing Leadership – Undergraduate, Graduate, & Professional

Variable	**Undergraduate**		**Graduate**[a]		**Professional**	
	Frequency	**%**	**Frequency**	**%**	**Frequency**	**%**
How many hours did you spend sleeping per day?						
4 hours	1	2.6	2	12.5	2	5.3
5 hours	10	26.3	4	25.0	11	28.9
6 hours	19*	50.0*	6*	37.5*	13*	34.2*
7 hours	5	13.2	2	12.5	9	23.7
8 hours	3	7.9	2	12.5	3	7.9
How many hours did you spend working in a paid job per week?						
None	16	42.1	7	43.8	1	2.6
1 to 20 hours	18*	47.4*	8*	50.0*	3	7.9
21 to 40 hours	3	7.9	1	6.3	8	21.1
41 to 60 hours	1	2.6	0	0	24*	63.2*
More than 60 hours	0	0	0	0	2	5.3
How many hours did you spend developing your leadership per day?						
None	2	5.3	1	6.3	4	10.5
0 to 1 hour	13	34.2	8*	50.0*	9	23.7
2 to 3 hours	15*	39.5*	6	37.5	10*	26.3*
4 to 5 hours	4	10.5	1	6.3	7	18.4
More than 5 hours	4	10.5	0	0	8	21.1

How many hours did you spend in leadership-related training or instruction per week?						
None	6	15.8	2	12.5	6	15.8
1 to 5 hours	17*	44.7*	9*	56.3*	20*	52.6*
6 to 10 hours	14	36.8	3	18.8	5	13.2
11 to 15 hours	1	2.6	2	12.5	2	5.3
More than 15 hours	0	0	0	0	5	13.2
How many times per year did you participate in competitions, presentations, or other events that demonstrated or acknowledged your leadership?						
None	3	7.9	3	18.8	3	7.9
1 to 5 times	21*	55.3*	8*	50.0*	23*	60.5*
6 to 10 times	7	18.4	3	18.8	5	13.2
11 to 15 times	3	7.9	0	0	2	5.3
More than 15 times	4	10.5	2	12.5	5	13.2

Note. * mode [a]Percentages were calculated based on those who attended graduate school (n=16)

Table H9

Leadership Cultivation in the Early Years, Later Years, and Now (Full Results)

Theme	**Early Years (%)**	**Later Years (%)**	**Now (%)**	**Representative Quote**
Held leadership positions in clubs/organizations	50.0	47.37	N/A	From a young age I saw myself being a leader in elementary school. I often led scout groups and games. Then when I was in junior high school, I became the student council president. Then in high school I was often voted to be a leader by my friends. I was not the student council president in high school or anything, I just wanted to be in the field of dance, and it went on to college.
Involved in religious organizations (after school)	26.32	0	0	During *ngaji*, sometimes I am the one who was appointed to lead the prayer, who call the teacher. That kind of role – not a formal role like a chairman or class leader - but an informal role… I took initiative and all my friends just said, "Yes, just go ahead."
Learning from role models	21.05	0	18.92	In the early years, I chose some figures to be my role models. I watched how they lead groups, things like that.
Participated in competitions and presentations	13.15	0	0	The preparation was very hard. We had to memorize many things. We had to memorize the rules of law in our country. I think the preparation developed my leadership, at least, in terms of managing my time since my early teens, and it created my leadership.
Family influence	10.53	0	0	My leadership developed, I think, due to my mother educating me with the values of being

				independent and making decisions on my own and I can be resilient and I can be tough to face any conditions, even the worst conditions. This is about my internal family, instead of getting training or education from books or other reference.
Attended formal leadership training	0	13.16	8.11	They exposed us to a number of influential figures. Basically, it was a leadership workshop but that is the only formal leadership development I participated in.
Work experience and responsibilities	0	7.89	34.36	My job experience generally helped a lot because operationalizing leadership is something that's a lot more developed in the multinational corporations.
Personal life circumstances	0	7.89	0	The actual reason I joined all of them was because I didn't like to be at home. I was from a broken home and I did not like to be at home. So, I wanted to spend more time in the university.
Accessing leadership resources (e.g., books, podcasts, etc.)	0	0	18.92	I read books about capacity building, how to influence people, how to start a good conversation, how to find your own goal, how to make yourself comfortable in your workplace.
Minimal involvement in organizations/extracurricular activities	18.42	0	N/A	I was raised to be an expert in academic by my parents. I barely joined any activities about leadership because my parents didn't think that was important.
Not intentionally developing leadership	0	0	13.15	There’s nothing I do now to intentionally improve my leadership.