Institute for Development Impact

NextGen - Youth Engagement in Cocoa Sector

BASELINE STUDY REPORT

Submitted to

Mars Foods Inc. and Swisscontact

By

Institute for Development Impact

in collaboration with

Payo Payo

This baseline study was commissioned by Mars Food Inc., in collaboration with Swisscontact and the Millennium Challenge Account to inform the design and implementation of a pilot program as part of a broader initiative to engage the next generation of young people (18-35yo) in the cocoa farming ecosystem. This report represents the combined work of several members of the I4DI team located around the world. I4DI wants to acknowledge the efforts of the following individuals who played an important role in making this report a reality:

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Executive Summary

The NextGen Project is conceived on the principles of positive youth development, and envisages a STEM-Agriculture based participatory design curriculum in three SMKs in rural cocoa communities of Bone Bone, Tomoni, and Walenrang as a way to strengthen engagement of youth and contribute to professionalization of cocoa farming in the province of South Sulawesi, Indonesia. The purpose of this study is to identify, collect, analyze, and document the existing developmental assets of youth in and around cocoa farming communities.

Methodology

I4DI used a mixed-methods approach that utilized qualitative and quantitative data collection instruments. Two quantitative surveys were developed for two subsets of youth—SMK students and recent graduates of the SMKs. Qualitative data collection in each community included Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) held with students and alumni of SMKs and representative social groups to assess levels of community engagement, perceptions and receptivity to program interventions by community members (farming families and key community stakeholders). In depth quantitative/qualitative analysis was conducted on all aspects of the baseline study to identify trends, produce differentiated results and interpret findings.

Summary of Key Findings

Overall, students and alumni reported similarly positive responses on both internal and external development assets. Students and alumni most commonly felt they had the most control over education and occupation decisions and the least control over decisions related to marriage, friends, and receipt of money. Both students and alumni struggle with critical thinking. Both groups engaged in this study have supportive relationships with friends, family, and others. While students and alumni are interested in community engagement and believe that youth have the capacity to effectively engage their broader communities, actual engagement was not evident.

On evidence-based science and cocoa farming, most community members recognized the importance of science and agreed that one should know both the theory and the practical applied knowledge of a subject. Community members also indicated a sense that cocoa farming was semi-modern and that climate instability and changes were affecting environmental patterns related to crop production.

Youth involvement in cocoa sectors faces a number of perception hurdles and challenges-most notably, the perception that farming is not prestigious and not viable as full-time occupation, youth migration out of rural communities, competing career choices, and lack of interest in farming. However, among students who remain in rural communities, many retain a positive attitude on the potential success of cocoa farming.

Perceptions of social capital within the community reveal that **youth enjoy a high degree of social capital in their communities with generally strong family relationships and trust between them and their parents that grows with age.** Religion and religious institutions play an important role in personal lives and creating opportunities for community social cohesion and

trust building. Substance abuse (alcohol, drugs, and smoking) surfaced as the most prominent problem facing youth, as well as involvement with gangs.

Education is either absolutely or very important to most respondents, and they felt positively about SMKs and thought that they provide a solid educational foundation and prepare youth for immediate employment upon graduation, without precluding them from continuing their education onto university levels. Students felt content with the choice of what they are studying and did not have a strong preference between lecture and practical teaching methods, but leaned towards wanting practical lessons over lecture style classes. Critical thinking and creativity was identified as one area of weakness and yet recognized as important for the future in an increasingly competitive world. Community respondents and demonstrate a nuanced understanding of critical thinking and creativity within local education systems and understood its importance, emphasizing the demand for more of the focus on it in the educational context.

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Introduction

Mars Foods Inc, in collaboration with Swisscontact and the Millennium Challenge Account, is in the early stages of designing and implementing the NextGen Project, a pilot program which is a part of a broader initiative to engage the next generation of young people (18-35 year olds) in the Indonesian cocoa farming ecosystem. NextGen involves the engagement of vocational schools, particularly SMKs, as well as youth in rural cocoa communities in three communities: Bone Bone, Tomoni, and Walenrang—all in the province of South Sulawesi, Indonesia.

The NextGen Project utilizes the principles of positive youth development, as well as a STEM-Agriculture based participatory design curriculum in three SMKs (mentioned above). The project's goal supports local communities' socio-economic resiliency via capacity building of the next generation of professional cocoa farmers capable of delivering a sustainable supply of cocoa. The project also provides a platform for the establishment of collaborative relationships between vocational schools, youth, cocoa farmers, and community members; and an opportunity to conduct a baseline assessment enabling the partners to validate and/or adjust the NextGen intervention strategy.

Purpose

The primary purpose of this study is to identify, collect, analyze, and document the existing developmental assets of youth in and around cocoa farming communities in Bone Bone, Tomoni, and Walenrang. Youth are the primary focus in this baseline study, as well as the students of the three SMKs. The study was carefully designed to provide gender disaggregated, in-depth insight into the developmental assets of youth in cocoa farming communities. These assets include their hopes, aspirations, motivations, and resilience, as well as their perceptions on evidence-based science, cocoa farming, and the drivers of youths' future involvement in cocoa sectors.

Baseline Objectives

The baseline study was designed to accomplish five objectives. The study's research design was created to gather data to facilitate analysis of findings and recommendations oriented around meeting the following five objectives:

1) Provide in-depth insight into the developmental assets of existing students and recent graduates of two vocational institutions in cocoa farming communities, including their hopes, aspirations, motivations and resilience; their perceptions on evidence-based science and cocoa farming; and the drivers of youth involvement in the cocoa sectors;
2) Provide in-depth insight into the perceptions and trust of parents, teachers, community stakeholders of youth in cocoa farming communities, including an analysis of the social capital the youth have in the wider cocoa farming community;
3) Provide in-depth insight on the existing teaching and learning process in the 2 vocational institutions, including the curriculum on STEM and local content; capacity of schools and teacher's, profile of graduates; gaps and other influencing factors, as the basis for developing program for improvement of the SMK's education.
4) Provide qualitative and quantitative data for measuring the pilot program's achievements.
5) Identify any risks that may influence or impact the implementation and impede the progress of the pilot program.

Report Outline

The report consists of the following sections. The first section presents the baseline methodological approach utilized in this study. An overview of the socio-economic background of Indonesia and the study's focus on South Sulawesi's contextual background is provided in the second section. This is followed by a short section on the study's demographics. The fourth section provides a summary of the study's key findings and data analysis. A more detailed discussion of these findings, supplemented with numerous tables and graphs, is contained in section five. Additional stakeholder engagement resulted in the presentation of recommendations in section six. The Key Performance Indicators (KPIs) and Risk Assessment constitute the final two sections.

I - Baseline Methodological Approach

Three important factors influenced I4DI's methodological approach utilized in this study. In discussion with Mars and Swisscontact, I4DI first wanted to incorporate theories related to Positive Youth Development. Here, youth are valued and recognized as part of the solution and not a problem. Inherent in young people are countless positive assets that can be channeled toward improving their own lives, their families, and the lives of those residing in their communities.

Second, I4DI considered a participatory, human-centered design approach, where youth and the members of their communities are not considered objects of development, but active protagonists. I4DI maintains the conviction that these youth and community members are recognized as capable and respectfully engaged in the research process.

Finally, I4DI borrowed concepts from developmental evaluations to inform the baseline methodological approach. Development evaluation "is an approach to understanding the activities of a program operating in dynamic, novel environments with complex interactions. It focuses on innovation and strategic learning rather than standard outcomes and is as much a way of thinking about programs-in-context and the feedback they produce."[1] This approach supports the NextGen Pilot by guiding its adaption and adoption to the emergent and dynamic realities arising from various interacting and interdependent variables at play in these communities—ones that characterized by no centralized location of control. A developmental perspective can better capture real time snapshots to generate learning, insight, and strategies to work in complex environments where it is uncertain how to solve problems and stakeholders' interest may be in conflict.[2]

To maintain methodological rigor throughout the study process, I4DI worked with, Payo-Payo, a local research and data collection agency located in Makassar, local and international Mars staff, and Swisscontact. This highly collaborative process ensured the high fidelity of research approaches, instruments, and corresponding analysis to accomplish the purpose and objectives of the baseline study.

Data Collection Instruments

To facilitate triangulation of data analysis, I4DI used a mixed-methods approach that combined qualitative and quantitative data collection instruments. Details for these methods and tools are as follows:

Quantitative Methods

Two quantitative surveys were developed for two subsets of youth—SMK students and recent graduates (alumni) of the SMKs. The student survey examined youth capacity and perceptions across the following domains:

- Internal development assets (critical thinking, commitment to learning, hope in the future, faith, etc.)

[1] https://censemaking.com/2011/11/19/what-is-developmental-evaluation/

[2] For additional insight, see Michael Quinn Patton, 2010. *Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use*.

- External development assets (social support, social trust, community engagement, conflict resolution)
- Youth empowerment
- Cocoa farming

The survey designed for SMK alumni explored similar themes, but replaced student specific questions with questions related to their outlook after graduating, including an assessment of the quality of their education and how it prepared them for life after school.[3]

Regarding sample sizes for the student/graduate surveys, I4DI consulted with the NextGen team to determine the most appropriate level of power analysis and confidence interval. We used 80% and 95% respectively, resulting in a student sample size goal of 200 per school (100 female/100 male), for a total of 600 respondents. For graduates the same level of power analysis and confidence interval was used, resulting in a total sample size goal of 120 alumni (40 per school—20 female/20 male). This alumni sample size would allow comparison of the alumni as a whole with other student groups, but will not facilitate in-depth comparison between students and alumni from a particular school. This was viewed as an appropriate compromise since alumni are not the focus of the intervention. Graduates' collective insight will be important though for informing pilot interventions.

Qualitative Methods

Qualitative instruments assessed levels of community engagement, perceptions and receptivity to program interventions by community members (farming families and key community stakeholders). This component will generate insight into the perceptions and trust of parents, teachers, community stakeholders of youth in cocoa farming communities, including an analysis of the social capital the youth have in the wider cocoa farming community.

Qualitative data collection in each community included Focus Group Discussions (FGDs) held with representative social groups, including: teachers/administrators, farmers (men and women), community leaders, parents, youth (male/female), and graduates. Some focus groups were organized by gender of respondents in order to explore differences in experiences or perceptions by gender.

In-depth, semi-structured Key Informant Interviews (KIIs) with representative members of each community were also conducted. KIIs used a semi-structured interview guide, as they allowed respondents to present and explain points freely while keeping to the purpose of key elements of the discussion. By conducting research in Bone Bone and Walenrang, I4DI is able to compare and contrast groups within and between the cocoa growing communities, determine trends, and identify the presence and levels of factors that may be affected by or have an effect on the intervention. Data from Tomoni, the non-intervention community, can be used for comparative purposes. Individual in-depth FGD and KII guides were developed for both specific groups within the communities. Each guide, contained carefully pre-selected questions aimed at guiding a free-flowing discussion.[4]

Sampling for qualitative data collection was more purposive than representative, in order to draw a sample of a variety of respondent types who can provide quality information. The goal

[3] I4DI can provide the student and alumni survey upon request.
[4] I4DI can supply any of these guides upon request.

was to conduct seven FGDs and 12 KIIs per community, for a total of 21 FGDs and 36 KIIs.[5] Field work was staggered, with both qualitative and quantitative data collection occurring simultaneously. This reduced travel costs and efficiently utilized the time of Payo-Payo, the local research firm contracted for data collection. Interview facilitators were accompanied by a note taker who transcribed the discussions in the local language.

Data Analysis Process

In depth quantitative/qualitative analysis was conducted on all aspects of the baseline study to identify trends, produce differentiated results and interpret findings. R, an open source statistical software was used to perform descriptive analyses of the survey data. NVivo software was used to analyze the qualitative data, enabling the research team to easily identify common themes within and across the study sites using a mix of *a priori*[6] and emergent coding. [7] The research team evaluated these data sources, resulting in this collaboratively written report.

II - Indonesian Socio-Economic Context

The NextGen Pilot Project will be implemented on the Indonesian island of Sulawesi, the fourth largest island of the countries 17,000+ islands. Sulawesi has a population close to 19 million (compared to 240 million in all of Indonesia. The island is divided into six provinces, with a majority of the project happening in three of South Sulawesi's 21 regencies (Bone Bone in North Luwu Regency, Tomoni in East Luwu Regency, and Walerang in Luwu Regency). South Sulawesi's population was a little over 8 million (2010 census data). Average household size was 4.34 (vs. Indonesian average of 3.86).

South Sulawesi has reached 0.6915 on the 2015 Human Development Index (compared to 0.629 for Indonesia). Life expectancy in 2008 was 69.6 years. Over 13% of population was under the official Indonesian poverty line. The literate population was over 90%. The population never having attended school is consistently falling and is now at 7.28% of the population.

The unemployment rate was nearly 9% in 2009. The 2015 GDP was over 340,000 million Indonesian Rupiahs (23.8b in current USD). Per capita GDP was 40,100 thousand (2,800 in current USD). The South Sulawesi agricultural economy produces varieties of food crops: rice, corn, cassava, sweet potatoes, peanuts, and soybeans. Others include: cocoa, coffee, pepper, vanilla, cashews, and tea. Coast regions are involved with fishing and the mining sector is oriented around gold, magnesium, iron, nickel, and lead. Sulawesi is the main location of Indonesia's cocoa production and accounts for nearly 75% of Indonesia's total production. Across Indonesia small landholders own about 95% of the cocoa production area. Cocoa is the fourth largest source of foreign exchange (after palm oil, rubber, and coconut).[8]

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[5] This goal of 21 FGDs and 36 KIIs was reached during the data collection phase.

[6] A priori coding consists of theoretical concepts and themes I4DI developed prior to the coding process and are informed by the desk review, numerous field visits, and insight gathered from the quantitative data analysis.

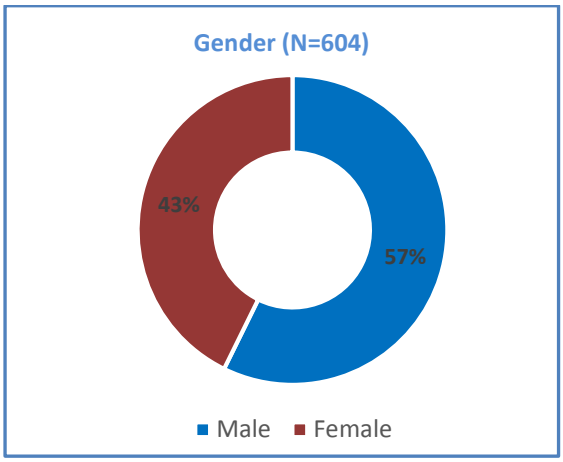
[7] Emergent coding is used to identify themes and subthemes that are new and were not previously identified, thus representing emergent ideas from the FGDs and KIIs.

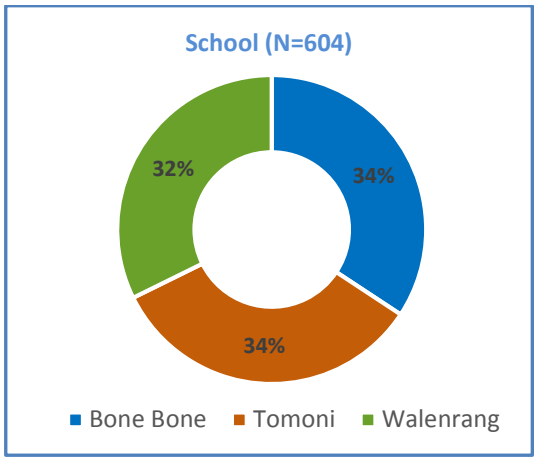
[8] Data pulled from multiple sources, primarily:
1) https://www.discoverworld.com/Indonesia/South-Sulawesi:In-depth#Demographics;
2) https://en.wikipedia.org/wiki/Sulawesi;
3) http://www.planetsulawesi.com/wb/pages/en/information/demographics.php?lang=EN;

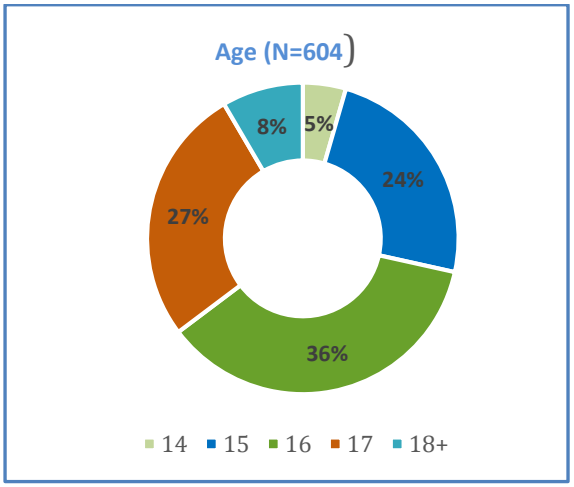
III – Demographics of Youth Respondents

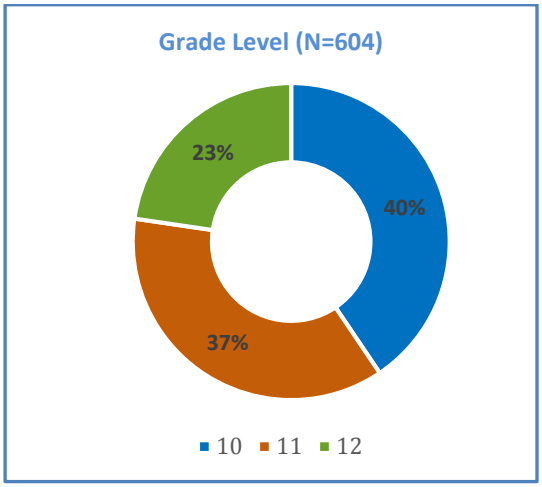
Student Demographics

A total of 604 current students from SMKs competed the surveys. The following graphs show the distribution of student respondents by basic demographic characteristics: gender, school, age, and grade level.







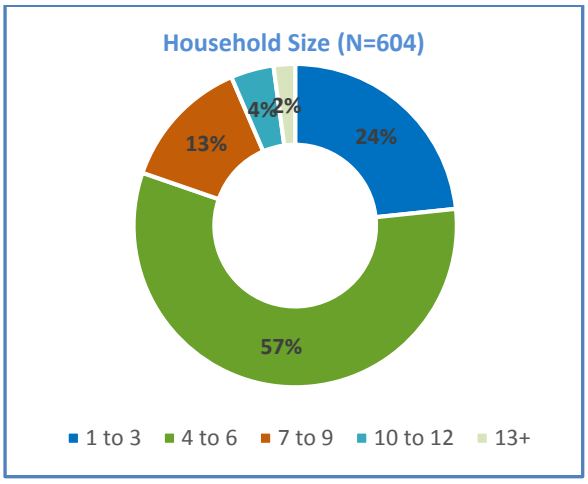


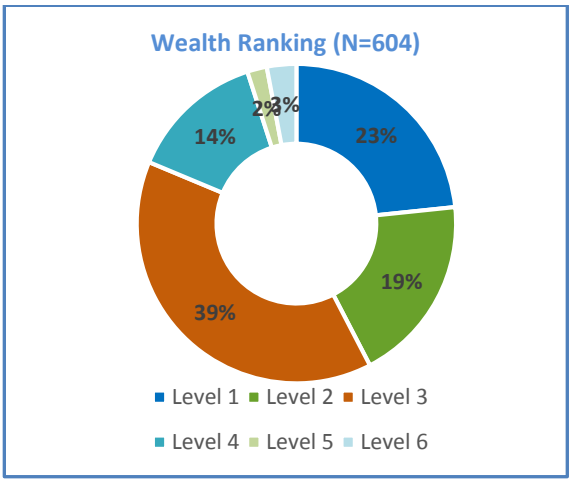
Males were more heavily represented in the sample, as were Grades 10 and 11; however, the sample sizes are large enough that inference can be drawn in all populations. Age followed a bell-shaped distribution – with the middle ages of 15 to 18 being best represented.[9] Finally, the respondents per school were very similar due to the sampling design (207 Bone, 202 Tomoni, 195 Walenrang). The respondents were asked to provide basic household-level information to understand the context from which the students come from, and which can be useful in future analysis. Below, household size and household wealth rankings are presented.[10]

4) http://hdr.undp.org/en/countries/profiles/IDN;
5) https://knoema.com/atlas/Indonesia/South-Sulawesi;
6) https://www.indonesia-investments.com/business/commodities/cocoa/item241?

[9] Inference among 19-20-year-old students could not be reliably drawn because there were not enough of them in the sample.
[10] Wealth ranking was determined by student's self-assessment of household wealth vis-a-vis comparison with other households.

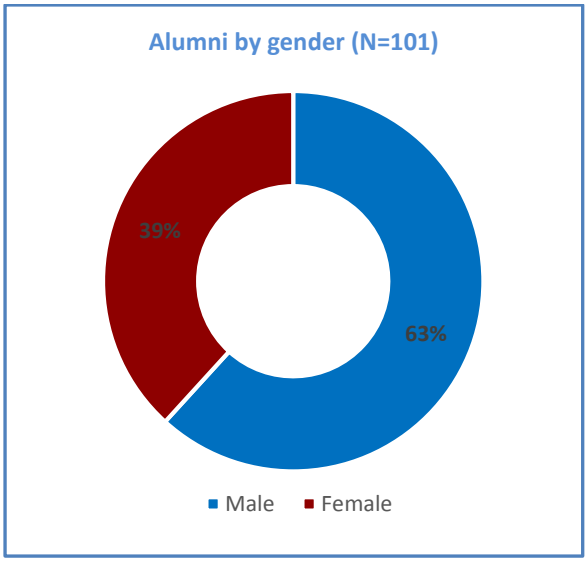
The most common reported household size is between 4 and 6 members. Based on students' self-assessment of a wealth ranking, most respondents falling into the lower wealth rankings, with the two highest rankings being so thin that statistical inference cannot be easily drawn in those populations.[11]

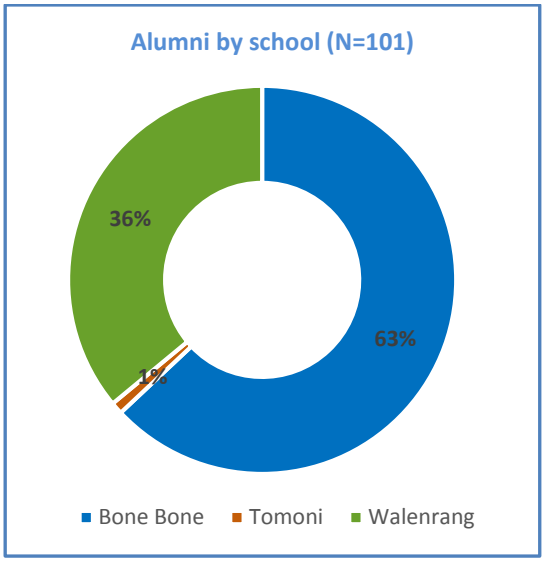




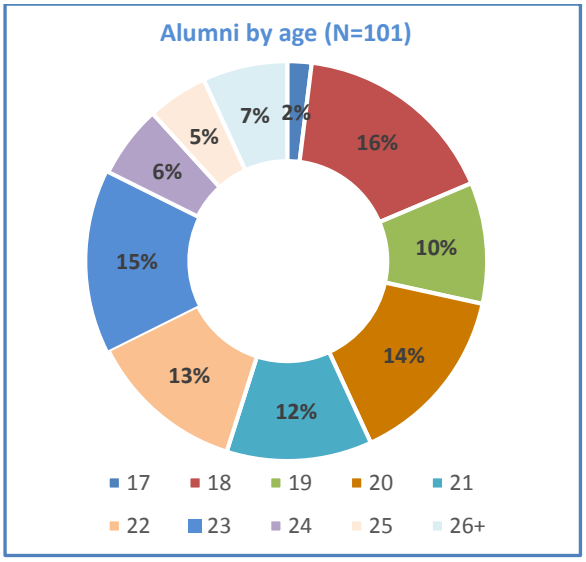
Alumni Demographics

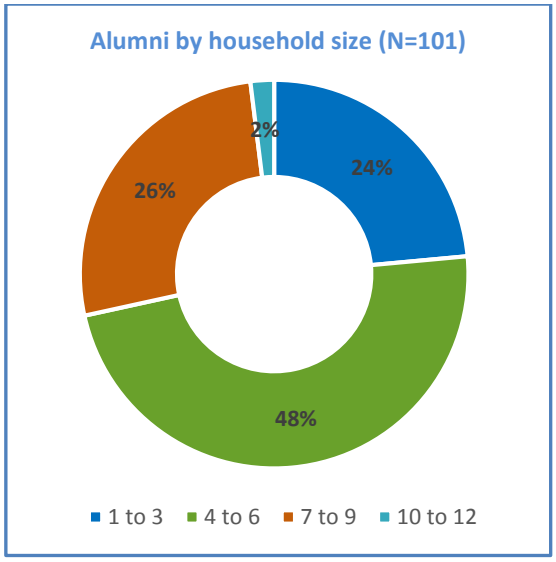
Alumni were also targeted for survey data collection, but the study reached a considerably less respondents compared to students. This was due primarily to one factor—schools do not maintain detailed lists of their alumni, making it hard for the research team to identify and reach the alumni with the survey calls. The Mars NextGen team worked with school officials to compile lists and tracked down as many alumni as possible. A total of 101 alumni from Bone and Bone and Walenrang were able to complete surveys that were processed in this study. Only a few surveys were completed in Tomoni due to additional challenges of getting alumni lists built. The following graphs show the distribution of the alumni over some basic demographic categories, such as gender, school, age, household size, and wealth ranking.





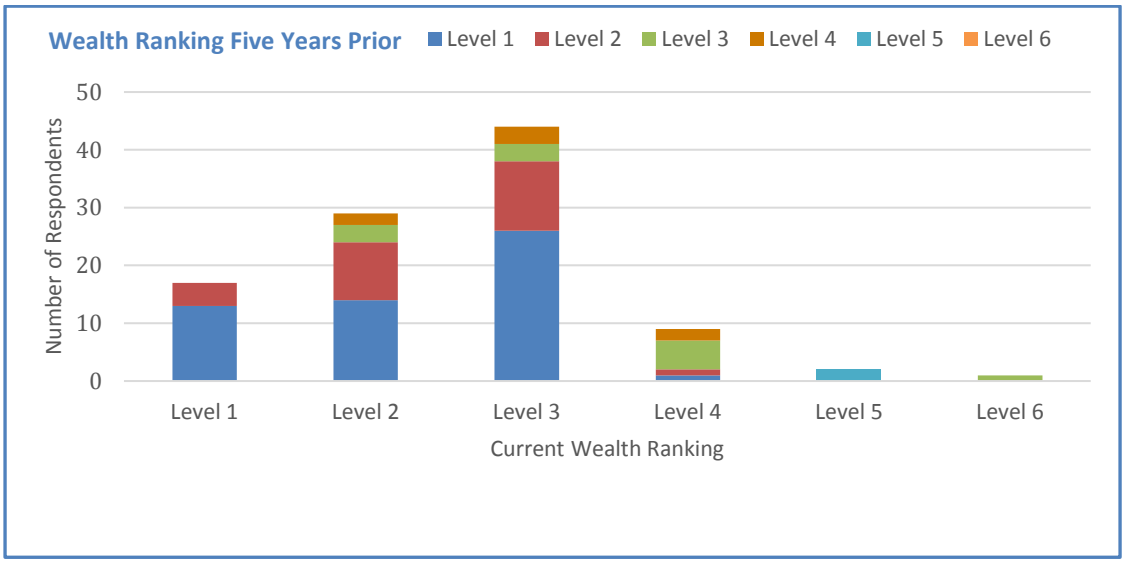
[11] Respondents were asked to rank their household's wealth with the following instructions: If you viewed wealth as a six-step ladder, with the bottom step being very poor and the top being very rich, where would you place your family on this ladder?





Most respondents were male, and skewed towards an age in the early 20s. Household sizes are comparable to the student population. Finally, the wealth ranking[12] of alumni respondents is given below, crossed with their wealth ranking five years ago.

In general, based on their self-assessment, it appears that there has been progressive movement among alumni from the poorer levels up to the richer levels over the period specified in the study. At each current wealth level, a sizeable number of respondents either were at that wealth level 5 years prior, or had risen to that wealth level from a lower class. For example, approximately a quarter of alumni respondents state they have moved from Level 2 to Level 3; and that nearly half in Level 2, used to be in Level 1 five years ago. However, there a few alumni who reported Level 6 wealth five years ago, but have now fallen into Levels 2, 3, and 4. While these trends may not statistically significant, it is important to note an overall improved perception of alumni wealth now compared to five years ago.



[12] Same instructions

for wealth ranking are given to both students and alumni, except alumni were asked to retrospectively rank wealth five years ago.

IV - Key Findings and Data Analysis

Development Assets of SMK Students & Alumni in South Sulawesi

This section provides in-depth insight into the key developmental assets of existing students and recent graduates of two vocational institutions in cocoa farming communities, including their hopes, aspirations, motivations and resilience; their perceptions on evidence-based science and cocoa farming; and the drivers of youth involvement in the cocoa sectors.

As previously noted, a quantitative survey assessed a variety of internal and external assets identified in positive youth development literature. While the absence of any one of these traits will not necessarily prevent youth from becoming a successful adult, the more assets present, the more likely the youth will find future success. To enhance development outcomes, the presence of such assets can be leveraged by program planners, and programs also may employ strategies to strengthen assets that may be lacking. Additionally, focus group discussions (FGDs) and key informant interviews (KIIs) conducted in all three communities explored perceptions of evidence-based science and cocoa farming and the drivers of youth involvement in cocoa sectors.

The following is a summary of the findings and implications for the NextGen program.

- **Agency** - Students reported high degrees of agency with regard to education and occupation decisions and the least control over decisions related to marriage, friends, and receipt of money. Levels of agency did not differ by school. Within schools, there were no differences in agency by gender and generally few differences by class in school.
- **Internal Locus of Control** - The vast majority of students reported a belief that trying hard would improve their situation in life. This was true in each of the three schools, although the proportion was statistically higher in Tomoni and Bone Bone compared to Walenrang.
- **Problem Solving** - When students had problems, they reported being more likely to try to think of various solutions on their own rather than ask others for help. This suggests that assisting young people with seeking support from trusted sources when they need it instead of struggling through problems on their own might be needed for complex problems.
- **Critical Thinking** - Generally, in-school respondents expressed difficulty with critical thinking tasks including separating true and false information, finding new ways of looking at a situation, and linking facts together. This suggests the incorporation of explicit critical thinking instruction in the classroom (blended into STEM curriculum) may be beneficial.
- **Conflict Resolution** - As it relates to conflict resolution, many students appeared to be conflict-averse and inclined to find solutions to conflict. Generally, students tended to take one of three approaches to conflict resolution, regardless of where the conflict occurs. They most commonly described were trying to compromise, presenting their point of view, or asking others for help.
- **Prosocial Behavior** - A majority of students in each school indicated that they liked to ask others for their opinions and try to find ways to cooperate, and many in each school believed it is more important to get along than it is to win an argument.

- **Self-regulation** - School-related self-regulation is one domain in which many students may benefit from guidance. Particularly on items assessing timely assignment completion and being disciplined at school for rule infraction, there was room for improvement in self-regulation for many students. Multifaceted interventions involving students, parents, and teachers may be one way to improve self-regulation. Providing training on organizational skills for students, including time management, coupled with parent and teacher assistance may provide a better environment to enhance self-regulation.
- **Belief in the Future** - The vast majority of students believe that working hard in school will lead to a better job in the future. However, on a "hope index" scale created for this study, students were somewhat more pessimistic about the extent to which 9 different factors would have good outcomes over the next two to three years. On a separate "success index" created for this study, students rated 11 factors selected to be very important for their future success.
- **Peer and Family Support** - On a variety of statements measuring their personal feelings of trust, many students indicated neither agreement nor disagreement. However, other respondents generally reported trusting various people in their lives – friends, parents, local leaders, classmates, neighbors, etc. Similarly, students recognized that community members generally care for and trust one another.
- **Leadership -** There appear to be a subset of youth in each school who frequently lead in groups at school and in extracurricular settings and who organize their schoolmates to get things done. However, there are also sizeable groups of students who infrequently demonstrate leadership qualities. Given these findings, it may be useful to not only capitalize on these natural leaders for promotion of NextGen program objectives, but also to cultivate leadership traits among other students.
- **Community Engagement** - Most students exhibited interest in being engaged in their communities and schools. Most believed that it is important to keep abreast of activities in the community and that young people do have a good understanding of important issues affecting their community or school. The majority in each school indicated there were opportunities for young people to express their opinions and be actively involved in the neighborhood or school. Moreover, a majority believed that youth possessed the ability to be involved and make decisions about their neighborhood or school. However, most youth indicated limited actual engagement. It was commonly believed that community leaders or school officials would not listen to youth opinions; across schools, the majority of respondents indicated that local government officials had not sought their opinions or ideas in the prior year. Even when their ideas were sought, many students did not feel their feedback was put into practice.
- **Alumni responses** - Overall, alumni responses were quite similar to those of students on measures of both internal and external assets. For example, alumni most commonly felt they had control over the same areas of their life that students had reported. Alumni struggle with critical thinking, as do students. Alumni have supportive relationships with friends, family, and others. Alumni are also interested in community engagement and believe that youth have the capacity to engage effectively in their schools and communities. Among alumni, there were few differences in response patterns between the schools or with regard to respondent gender or age.

A more detailed breakdown of data and analyses can be found for students in *Discussion Sections 1 and 2,* and for alumni in *Discussion Sections 3 and 4*.

Perceptions of Evidence-based Science & Cocoa Farming

Among respondents, most members in all communities recognized the importance of science and there is a general agreement that one should know both the theory and the practical applied knowledge of a subject in order to master it.

- **Innovation & Technology** - Various perspectives related to innovation and technology were displayed, with more respondents agreeing that cocoa farming was semi-modern in scope, between traditional and modern practices.
- **Climate Effects & Disruption to the Environment** - Respondents across all groups agreed that climate effects and disruption to the environment were occurring, though most lacked the scientific language to describe the concept in more technical terminology. The most common issues mentioned related to lack of predictability in rain patterns, unusual changes in normal temperatures, environmental degradation due to deforestation, increases in pests and other diseases that influence crops.

A more thorough treatise of focus group discussions and interviews can be found in *Discussion Section 5*.

Drivers of Youth Involvement in Cocoa Sectors

Perceptions gained from FGDs and KIIs related to views of the future of cocoa farming are mixed across all three communities, with seven main drivers derived from respondents' comments and survey data. Of these drivers, five are more negative in tone and two are more positive.

- **Prestige** - Farming is simply not viewed as prestigious. It is associated with hot, dirty, exhausting manual labor under the sun and conducted mostly by an older generation (40 to 60 years of age).
- **Youth Migration out of Rural Communities** - Statistically significant survey data show that students from Bone Bone and Tomoni are more likely to stay in the village after graduation, while Walenrang students are more likely to leave for Jakarta, Makassar, Palopo, or elsewhere.
- **Competing Career Choices** - Cocoa farming faces competition not only from "uniform" wearing jobs, but also the mining and maritime industry.
- **Viability of Full-Time Farming** - Among respondents, a perception exists that cocoa farming is not currently considered a viable full-time future career.
- **Lack of Interest** - A general lack of interest, not just in cocoa farming but other crops as well, drive youth to avoid careers in agriculture. This lack of interest could be closely tied to the prestige factor or a negative outlook toward the future of farming in general, as is evident in the next driver.
- **Youth Belief in the Future of Cocoa Farming** - Students that are deciding to stay in their respective villages are likely driven by the belief they can have success as a cocoa farmer as compared to those that wish to leave.

- **A Small Minority See Cocoa Farming Positively** - A minority of respondents expressed positive attitudes about the future of cocoa farming. Advantages of cocoa farming included: all ages and gender can work with cocoa, it is easy to harvest, money can be earned faster than palm oil, and there are numerous side businesses one can conduct, like selling seedlings or running a nursery.

A more thorough treatise of focus group discussions and interviews can be found in *Discussion Section 6.*

Perceptions & Trust of Parents, Teachers, Community Stakeholders of Youth in Cocoa Farming Communities in South Sulawesi.

Utilizing quantitative data from surveys and qualitative data from FGDs and KIIs, this section provides in-depth insight into the perceptions and trust of parents, teachers, community stakeholders of youth in cocoa farming communities, including an analysis of the social capital the youth have in the wider cocoa farming community.

An analysis of social capital is an important way to understand the strengths and the weaknesses of these three targeted communities. The external assets of youth are enmeshed within this social capital. Focus groups and interviews were conducted to get a better understanding of several components of social capital, including relationships between students, family, and community; social cohesion; social trust; religious values; perceptions of community engagement, and conflict resolution practices. Each of these components are addressed in greater depth in this section, with the last portion revealing some of the negative perceptions of youth than can hinder their engagement with society.

- **Relationship Support** - Parents play different roles in the lives of their children that either foster positive or negative relationships. Positive relationships with parents may mean more positive outcomes in school performance and behavior. Vocational schools provide enrolled students with the space and time to build peer support groups. The relationships students have in school foster loyalty, solidarity, encouragement, knowledge and trust, and typically cross both ethnic and religious lines.
- **Social Cohesion -** Changing social values and a decrease in traditional socio-economic activities is perceived to lead to fewer opportunities to bring people together and foster trust. Religious organizations continue to provide a venue for trust building, cooperation, and social cohesion, including across faiths. Sports, festivals, student associations, clubs, jobs, and craft and trade groups all help build and sustain cohesion in the communities that identify the challenges of individualism, unemployment/idleness, and inequality threaten cohesion.
- **Social Trust** - Within families, mutual trust is developed—parents trust their children more as they get older and children tend to trust their parents and other adults in the community based on traditional respect for elders.
- **Religious Values** - Analysis of data across all communities demonstrate the importance of religion both privately and publicly. Religious groups also set up organizations to foster healthy forms and faith and spirituality among youth beyond what they learn in the home.
- **Conflict and Resolution within Communities** - Conflicts mentioned among respondents range from youth brawls, students being expelled from school, to domestic

issues and substance abuse. Overall though, major forms of conflict did not appear present.

- **Social Capital Hindrances -** Substance abuse (alcohol, drugs, and smoking) and involvement with gangs were perceived by most focus group respondents and interviewees as problems facing youth in their communities.

A more thorough treatise of focus group discussions and interviews can be found in *Discussion Section 7.*

Perceptions of the Education System in South Sulawesi

This section provides an insight on the existing teaching and learning process in the two vocational institutions, including on the STEM curriculum and local content; capacity of schools and teachers; profile of graduates; gaps and other influencing factors, as the basis for developing program for improvement of the SMK's education.

- **Quality of SMKs -** Overall, there appears a positive assessment of the three SMKs evaluated, with negative views of the SMKs in the minority.
- **SMKs versus SMAs -** A majority of the education stakeholders believe SMKs provide a solid education and prepare youth for immediate employment upon graduation, but do not necessarily preclude students from pursuing a university degree. A minority view thought SMKs were inferior to SMAs.
- **Student Perceptions** - Survey data reveal that almost all students in the three schools view the importance of completing their education as either absolutely or very important.
- **Alumni Perceptions** - A majority were satisfied with the way their SMK prepared them for a successful future.
- **Sources of Information -** There is no meaningful difference between schools, genders, or ages when it comes to the sources of information the students utilize.
- **Choice of Curriculum -** The respondents seemed to feel that they had a measure of control over their curriculum, with many playing a role in choosing what to study, and very few wishing to change that course of study.
- **Quality of Teaching** - Most students did not convey a strong preference between lecture and practical teaching methods, although overall the respondents leaned towards wanting practical lessons over lecture style classes.
- **Critical Thinking and Creativity** - Community respondents demonstrate a nuanced understanding of critical thinking and creativity within local education systems and understood its importance for the future in an increasingly competitive world.

A more thorough treatise of focus group discussions and interviews can be found in *Discussion Section 8.*

V- Discussion of Findings

1.0 SMK Student Profile – Internal Assets

1.1 Agency

Students reported high degrees of agency with regard to education and occupation decisions and the least control over decisions related to marriage, friends, and receipt of money. Agency, or the capacity of an individual to make his or her own choices independently, was measured using seven items inquiring about the level of control that each respondent had with regard to decisions concerning marriage, friends, education, occupation, spending money, receiving money, and use of time. Responses were scored on a four-point scale indicating no control, little control, some control, or a lot of control.

Between the schools, there were statistical differences in student perceptions of agency on decisions concerning marriage,[13] friends,[14] education, [15] receiving money,[16] and using money[17] (Table 1.1). For each of these decisions, a higher proportion of youth in Walenrang reported no control compared to those in Bone Bone and Tomoni. Overall, respondents indicated that they had the most control over decisions regarding education, with approximately one-half of the in-school respondents in Bone Bone and Tomoni and 40% of respondents in Walenrang indicating they had "a lot of control" over education decisions (Table 1.1).

Subsequent to education, just over 40% of youth in Bone Bone and Tomoni and 35% of youth in Walenrang reported having "a lot of control" over their occupation. Between schools, there were no statistical differences in perceived agency related to decisions involving occupation or time use. The areas in which students reported the least degree of agency were with regard to marriage, friends, and receiving money.

Table 1.1. Perceived Agency of students, by School (%)

	Bone Bone	Tomoni	Walenrang
Marriage**			
No control	32%	25%	37%
A little control	23%	27%	16%
Some control	22%	31%	24%
A lot of control	23%	17%	23%
Friends**			
No control	25%	25%	37%
A little control	30%	26%	30%
Some control	30%	26%	17%
A lot of control	15%	23%	16%
Education***			
No control	9%	8%	21%
A little control	12%	11%	17%
Some control	27%	30%	23%

[13] p=.007
[14] p=.006
[15] p=.001
[16] p=.003
[17] p=.009

A lot of control	52%	51%	39%
Receiving money**			
No control	25%	16%	30%
A little control	29%	35%	28%
Some control	33%	35%	23%
A lot of control	13%	14%	19%
Using money**			
No control	10%	9%	14%
A little control	26%	25%	30%
Some control	36%	45%	31%
A lot of control	28%	21%	25%
Occupation			
No control	13%	9%	17%
A little control	14%	14%	21%
Some control	30%	36%	27%
A lot of control	43%	41%	35%
Use of time			
No control	10%	7%	17%
A little control	20%	21%	22%
Some control	35%	39%	24%
A lot of control	35%	33%	37%
*p<.05 **p<.01 ***p<.001			

In Bone Bone and Walenrang, there were no statistical differences in any of the measures of agency by school year, meaning that from year to year students reported similar degrees of control on each item measured. However, in Tomoni, there were statistically significant differences in levels of agency by school year with regard to marriage decision (p=.047) and education decision (p=.023). With regard to marriage decisions, there were higher levels of control reported among more senior youth compared to junior youth. For example, 62% of respondents in Class 12 reported some or a lot of control with regard to marriage decisions compared to 40% of respondents in Class 10. Differences in agency around education decisions were observed among students in Class 11, which tended to report lower levels of education-related agency compared to students in Class 10 or Class 12. Within each school, there were no statistical differences between boys and girls on any of the measures of agency.

1.2 Internal Locus of Control

The vast majority of students reported a belief that trying hard would improve their situation in life. On a five-point scale, ranging from strongly agree to strongly disagree, one item measured the extent to which respondents had an internal locus of control -- that is, the belief that one's life can be controlled. The vast majority of in-school respondents from each of the three schools agreed or strongly agreed that "If you try hard, you can improve your situation in life" (Table 1.2). However, there were some statistical differences in the exact distribution of student responses.[18] For example, 69% of youth respondents in Tomoni strongly agreed versus 60% of

[18] p=.006

youth in Bone Bone and 64% in Walenrang. Within each school, there were no statistical associations by gender or school class.

Table 1.2 - Internal Locus of Control among students, by School (%)			
	Bone Bone (n=207)	**Tomoni (n=202)**	**Walenrang (n=195)**
If you try hard, you can improve your situation in life**			
Strongly disagree	1%	5%	7%
Neither agree nor disagree	2%	1%	3%
Agree	37%	25%	27%
Strongly agree	60%	69%	63%
**p<.01			

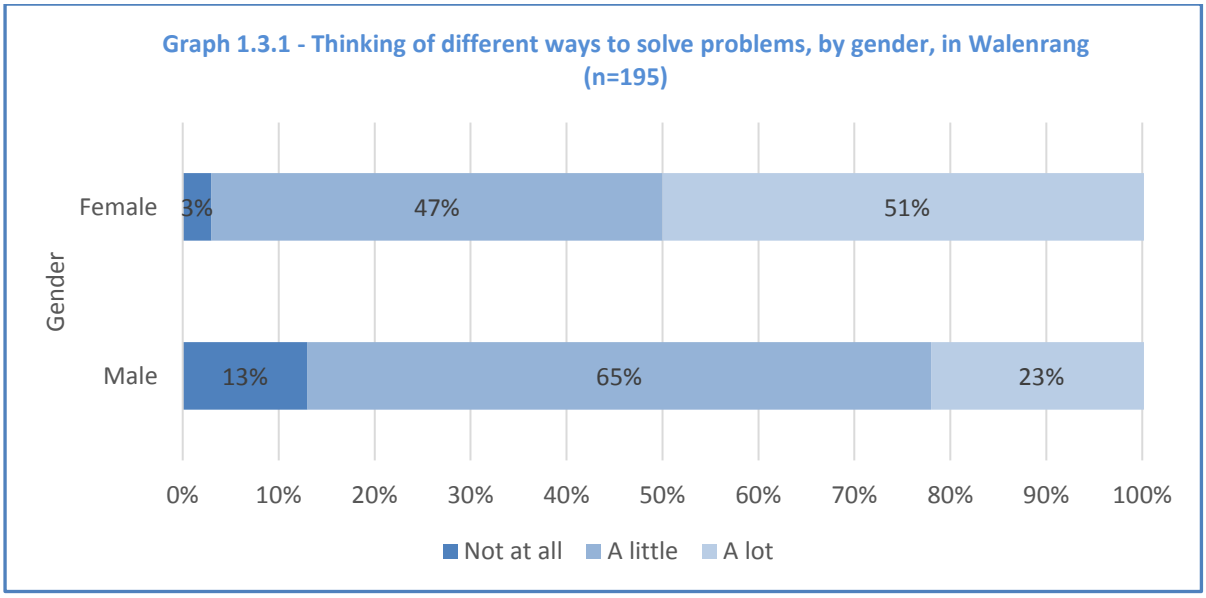
1.3 Problem Solving

When students had problems, they reported being more likely to try thinking of various solutions on their own, rather than asking others for help. Two items asked students to identify a problem or difficulty they had faced in the last week and then describe to what extent they had tried to think of different solutions and had asked other people for help or ideas to fix the problem. In all three schools, the most common answer was that students had performed these two problem solving steps "a little" of the time (Table 1.3). However, of these two types of problem solving actions, respondents were less likely to report asking others for help.

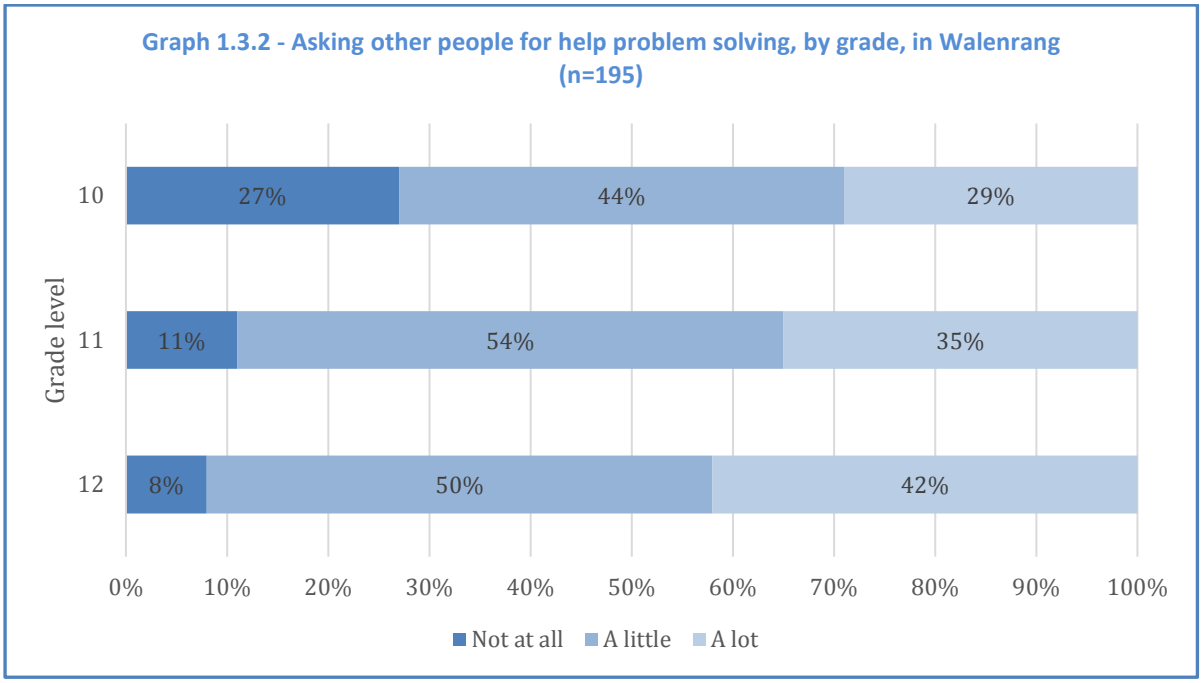
Table 1.3 - Problem Solving among students, by School (%)			
	Bone Bone (n=207)	**Tomoni (n=202)**	**Walenrang (n=195)**
Think of the problems/difficulties you faced in last week. To what extent did you try to think of different ways to change the problem or fix the situation?			
Not at all	8%	8%	9%
A little	54%	47%	58%
A lot	38%	45%	33%
Think of the problems/difficulties you faced in last week. To what extent did you ask other people for help or for ideas about how to make the problem better?**			
Not at all	13%	10%	17%
A little	61%	49%	49%
A lot	26%	41%	34%
*p<.05 **p<.01 ***p<.001			

On the item about thinking of different ways to change or fix the problem, there was no statistical association by school. Within each school, there was no statistical association by school class. Nor was there an association by gender in Bone Bone or Tomoni. However, in Walenrang there was an association by gender (Graph 1.3.1). About one-half (51%) of girls indicated they had tried to think of different solutions "a lot" compared to just 23% of boys.[19]

[19] p<.001



As shown in Graph 1.3.2, there were statistically significant associations between school and whether youth asked others for help.[20] For example, about 41% of respondents in Tomoni indicated that they had asked others for help "a lot" compared to about 26% in Bone Bone and 33% in Walenrang. Within each school there were no differences in response patterns by gender, but there were differences based on grade in Walenrang. The frequency with which students in Walenrang reported asking others for help "a lot" increased by grade.[21]



1.4 Critical Thinking

Generally, in-school respondents expressed difficulty with critical thinking tasks including separating true and false information, finding new ways of looking at a situation, and linking facts together. In each school, more than 65% of youth reported these tasks to be

[20] p=.004
[21] p=.047

somewhat difficult or very difficult. While there were slight differences in response patterns between schools, there were no statistical associations between measures of critical thinking and school.

Table 1.4.1 - Critical Thinking among students, by School (%)			
	Bone Bone (n=207)	**Tomoni (n=202)**	**Walenrang (n=195)**
When you hear about something that happened in your community, how easy is it for you to: Separate the true and false aspects of things?			
Very easy	14%	12%	17%
Somewhat easy	17%	15%	17%
Somewhat difficult	50%	56%	50%
Very difficult	19%	17%	16%
When you hear about something that happened in your community, how easy is it for you to: Find new ways of looking at the situation?	**Bone Bone (n=207)**	**Tomoni (n=202)**	**Walenrang (n=195)**
Very easy	16%	10%	21%
Somewhat easy	8%	9%	11%
Somewhat difficult	51%	55%	48%
Very difficult	25%	26%	20%
When you hear about something that happened in your community, how easy is it for you to: Link facts together?			
Very easy	16%	17%	21%
Somewhat easy	13%	12%	8%
Somewhat difficult	46%	46%	51%
Very difficult	25%	25%	20%
*p<.05 **p<.01 ***p<.001			

Within each school, there were no statistical differences in response patterns on any of the three critical thinking indicators based on student grade. Nor were there gender differences in response patterns on the item measuring new ways of looking at the situation or the item about linking facts together. However, there were associations between gender and the ability to separate true and false information (Table 1.4.2). In all three schools, a higher proportion of girls than boys reported that it was very easy to separate true and false information. Interestingly, a higher proportion of girls than boys also reported this task to be very difficult in Bone Bone and Tomoni. But, across all the responses, the only statistical differences by gender were in Tomoni[22] and Walenrang.[23]

Table 1.4.2 - Ease of Separating Information among students, by School and Gender (%)						
	Bone Bone (n=207)		**Tomoni* (n=202)**		**Walenrang* (n=195)**	
	Boys	Girls	Boys	Girls	Boys	Girls
Very easy	10%	19%	8%	17%	11%	28%
Somewhat easy	21%	11%	19%	9%	18%	16%
Somewhat difficult	52%	48%	59%	53%	52%	45%
Very difficult	17%	22%	14%	21%	19%	11%

[22] p=.032
[23] p=.015

1.5 Conflict Resolution

Many students appear to be conflict averse and inclined to find solutions to conflict. Generally, students tend to take one of three approaches to conflict resolution, regardless of where the conflict occurs. They most commonly described trying to compromise, presenting their point of view, or asking others for help. There were some statistical differences in approach taken by school attended, depending on the type of conflict (Table 1.5). For example, compromise was more commonly reported in Bone Bone and Tomoni than in Walenrang in conflict at home (p=.0254), conflict with friends (p<.001), conflict with schoolmates (p<.001), and conflict at school (p= .00768).

Within each school, there were few statistical differences in approach to conflict resolution by gender or grade in school. For example, there were class differences to resolution tactics when students in Walenrang faced conflict at home (p=.0425; data not shown). In Bone Bone, when it came to conflict with schoolmates boys more typically reported standing by their principles and girls more often reported an attempt to compromise (p = 0.0436; data not shown).

Table 1.5 - Methods of Conflict Resolution among students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
Home*			
Ask others	13%	16%	21%
Back out	5%	3%	7%
Present view	23%	25%	22%
Stand by principles	5%	6%	11%
Try compromise	54%	50%	39%
Friends***			
Ask others	19%	18%	23%
Back out	2%	2%	10%
Present view	26%	36%	32%
Stand by principles	11%	9%	13%
Try compromise	42%	35%	22%
Schoolmates***			
Ask others	19%	17%	16%
Back out	5%	3%	9%
Present view	32%	37%	37%
Stand by principles	10%	9%	19%
Try compromise	34%	34%	19%
School**			
Ask others	18%	17%	20%
Back out	2%	4%	8%
Present view	34%	32%	33%
Stand by principles	11%	14%	19%
Try compromise	35%	33%	20%
Neighborhood			
Ask others	30%	25%	31%
Back out	7%	8%	8%
Present view	18%	24%	22%
Stand by principles	12%	10%	15%
Try compromise	33%	33%	24%

*p<.05 **p<.01 ***p<.001

1.6 Pro-social behavior

A majority of students in each school indicated that they liked to ask others for their opinions and try to find ways to cooperate. Many students believe it is more important to get along than to win an argument. On two items measuring pro-social behavior, although there were no statistical associations by school, there were interesting trends in the data (Table 1.6). A majority of youth in each school indicated that they liked to ask others for their opinions and try to find ways to cooperate. A separate item assessed the extent to which respondents believed it is more important to get along than it is to win an argument. In Tomoni, 61% agreed versus 55% in Bone Bone and 49% in Walenrang. Within each school, there were no statistical associations between these two items and respondent gender. Responses also tended not to be associated with class in school, with the exception of Tomoni where those in grade 11 much more commonly disagreed that it was more important to get along than it was to win.

Table 1.6 - Prosocial Behavior among students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
I like to ask others for their opinions and try to find ways to cooperate.			
Strongly disagree	2%	4%	2%
Disagree	2%	5%	5%
Neither agree nor disagree	14%	9%	21%
Agree	82%	82%	72%
Strongly agree			
In general, I think it is more important to get along than to win an argument.			
Strongly disagree	7%	10%	12%
Disagree	9%	12%	11%
Neither agree nor disagree	29%	18%	28%
Agree	55%	61%	49%
Strongly agree			

1.7 Self-Regulation (school-related)

Many students may benefit from guidance on self-regulation as it relates to school. Three items measured self-regulation of youth in the context of school. Students were asked the frequency with which they had difficulty completing assignments on time, had skipped school, or been disciplined at school. Particularly on the items assessing timely assignment completion and discipline, there was room for improvement in self-regulation for many students (Table 1.7.1).

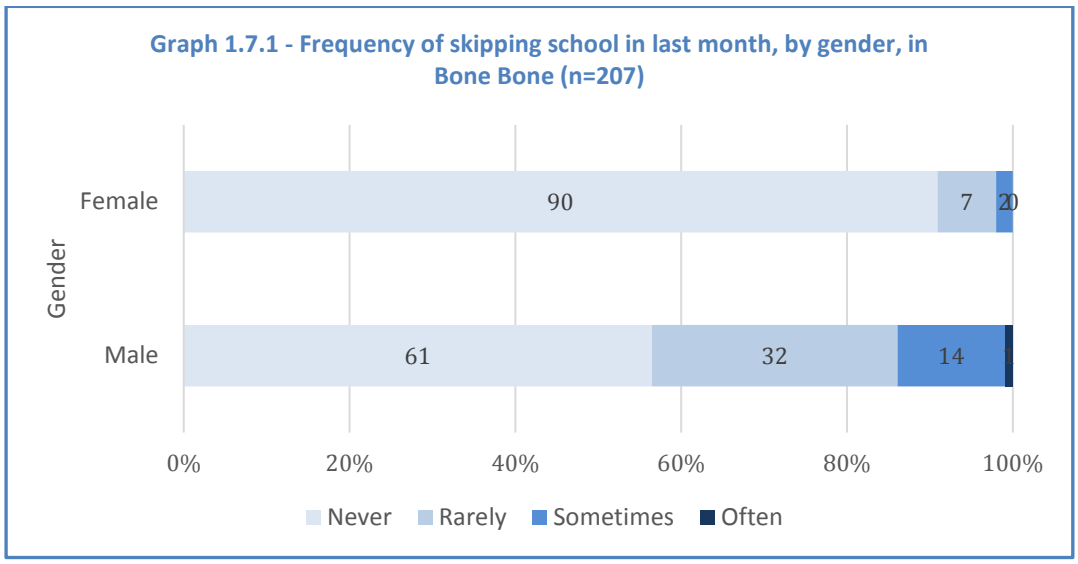
In all three schools, some students conveyed some difficulty completing their school work on-time in the prior week. In Walenrang, 23% of youth reported never or rarely having their school work done on-time, compared to 16% in Bone Bone and 20% in Tomoni. However these differences were not statistically significant at $p<.05$. Further, within schools there were no differences on this item by gender or by grade.

Table 1.7.1 - School-related Self-Regulation among students, by School (%)

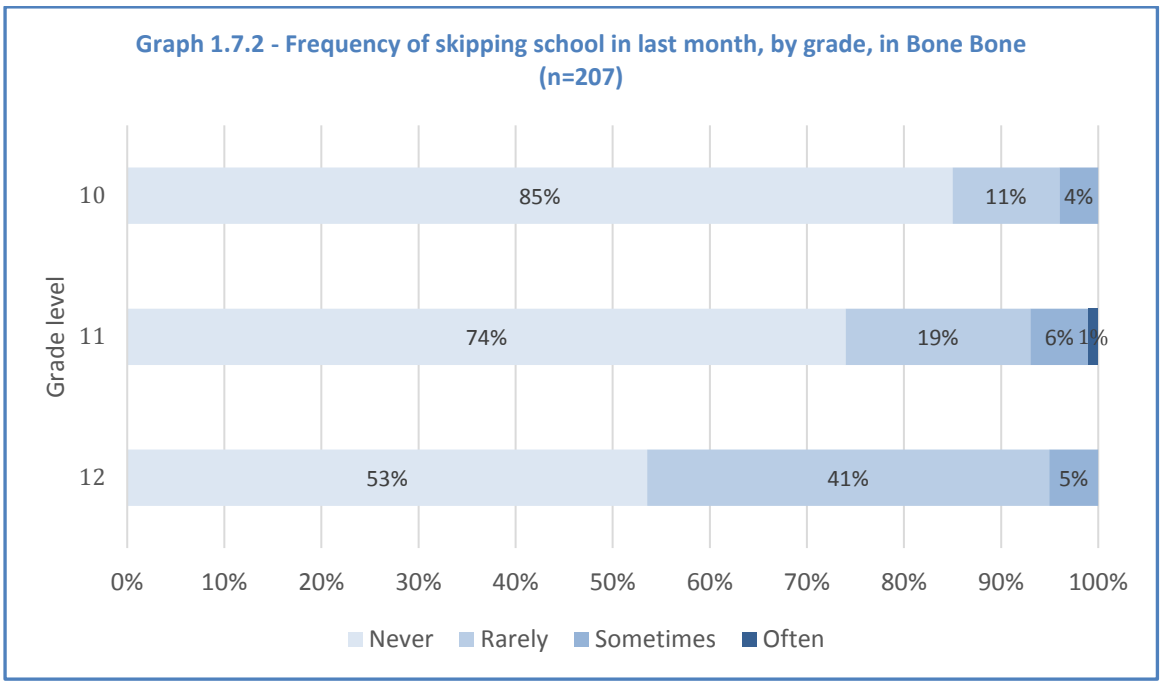
	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
In the last week, how often did you get your school work done on-time?			
Never	1%	5%	5%

Rarely	15%	16%	18%
Sometimes	30%	26%	38%
Often	33%	35%	25%
All the time	21%	18%	14%
How often do you skip the school, in the last a month?* **			
Never	72%	93%	57%
Rarely	22%	6%	24%
Sometimes	5%		15%
Often	1%	1%	3%
All the time			1%
In the last month, how often were you disciplined by teacher or school administrator for breaking school rules?			
Never	58%	65%	57%
Rarely	24%	22%	17%
Sometimes	13%	11%	18%
Often	4%	2%	7%
All the time	1%		1%
***p<.001			

While the majority of students indicated that they had never skipped school in the last month, the proportion varied widely across the three schools.[24] While 93% of respondents in the Tomoni school said they had not skipped school in the last month, just 72% of youth in Bone Bone and 57% in Walenrang reported the same. It was very uncommon, however, for students to report skipping often or all the time, regardless of school. Within Walenrang and Tomoni, there were no associations by gender or by school class. However, in Bone Bone, both gender[25] and grade[26] were statistically associated with the frequency with which students reported skipping school in the last month. In Bone Bone, the vast majority (90%) of girls reported never having skipped school in the month prior, compared to just 61% of boys (Graph 1.7.1). Whereas, 85% of 10th graders said they had never skipped school, 74% of those in grade 11 and 53% of those in grade 12 reported the same (Graph 1.7.2).



[24] $p<.001$
[25] $p<.001$
[26] $p<.01$



There was no statistical association between school and having been disciplined by school administrators for breaking rules in the last month, and the majority of students reported that they had not been disciplined. However, 13% of respondents in Tomoni stated that they had been disciplined sometimes, often, or all the time, compared to 17% in Bone Bone and 26% in Walenrang. Within schools, there was no association between having been disciplined and grade in school; however, there were statistical differences by gender within Bone Bone (p=.0043) and Tomoni (p=.00392) schools (Table 1.7.2). In both schools, a substantially higher proportion of girls than boys reported never having been disciplined in the last month.

Table 1.7.2 - Discipline at School among students, by School and Gender (%)

	Bone Bone (n=207)**		Tomoni (n=202)**		Walenrang (n=195)	
	Boys	Girls	Boys	Girls	Boys	Girls
Never	48%	74%	54%	75%	58%	56%
Rarely	27%	19%	27%	17%	14%	23%
Sometimes	18%	5%	18%	5%	19%	16%
Often	6%	2%	1%	3%	8%	5%
Always	1%				1%	

**p<.01

1.8 Belief in the future

The vast majority of students believe that working hard in school will lead to a better job in the future. One item assessed the extent to which respondents believed that applying themselves at school would result in a better job. On a five-point scale, ranging from strongly agree to strongly disagree, respondents were asked: "If you study hard at school you will be rewarded by a better job in future." The vast majority of students agreed or strongly agreed with this statement, and there were no statistical associations by school (Table 1.8.1). However, a few students in each school disagreed or strongly disagreed that studying hard would result in a better job. Within schools, responses were not statistically associated with gender or grade, with

one exception. In Walenrang, responses deviated somewhat by grade, but still the vast majority believed studying hard would result in a better job (p=.0476, data not shown).

Table 1.8.1 - Future Results of Studying Hard among students, by School (%)			
	Bone Bone (n=207)	**Tomoni (n=202)**	**Walenrang (n=195)**
If you study hard at school you will be rewarded by a better job in future.			
Strongly disagree	2%	5%	7%
Disagree	1%		1%
Neither agree nor disagree	2%	1%	4%
Agree	29%	21%	21%
Strongly agree	66%	73%	67%

Students also were asked the likelihood of nine other events occurring in the next two to three years. The individual items comprising the scale are presented in Table 1.8.2 among the pooled sample of all students.

A hope index was created by assigning a value of 1=not likely, 2=somewhat likely, or 3=very likely to each item. For each respondent, their answers were summed across the nine items and then scaled between 0 and 1. Thus, a score around .33 indicates that the respondent was on average "Not Likely" to have a belief that the future will be good; a score around .66 indicates that the respondent was on average "Somewhat Likely" to have a belief that the future will be good; a score around .99 indicates that the respondent was on average "Very Likely" to have a belief that the future will be good.

On average, students had a *p* value of 0.543 on this scale. That is, they were somewhere in the middle of "Not Likely" and "Somewhat Likely" to believe that in the next few years good things relating to those nine factors will happen. There was no statistical difference in the average hope index score by school.

Within schools, boys had higher average hope index scores than girls in Walenrang and Tomoni (p=.0095 and p=.0038, respectively), although all were still in the range of .518 and .562. There were no statistical differences in hope index scores by grade.

Table 1.8.2 - Hope in Future among students, Pooled Sample (%)			
	Not likely	**Somewhat likely**	**Very likely**
I will find a good job after I graduate	25%	72%	3%
I will have positive relationships with my family	61%	37%	2%
I will have positive relationships with my friends	46%	51%	3%
I will have opportunities to continue my education	39%	57%	4%
I will be prosperous	29%	67%	4%
My family will be prosperous	42%	56%	2%
My environment will have progressed	28%	67%	5%
Indonesia will be prosperous	48%	48%	4%
Cocoa farming becomes more profitable	44%	53%	3%

As part of a success index, students were asked how important 11 factors were to be successful in life, on a five-point scale ranging from not at all to absolutely important. The individual items comprising the scale are presented in Table x among the pooled sample of all students.

A success index was created by assigning a value of 1=not at all, 2=a little, 3=moderately, 4=very, and 5=absolutely to each response. For each respondent, their answers were summed across the 11 items and then scaled between 0 and 1.

The success index values in the three schools approximated 0.8, meaning that the respondents on average viewed these factors to be "very" important for success. There was a statistically significant difference in the average success index scores by school (p=.002), with students in Tomoni averaging a score of 0.781, those in Bone Bone averaging 0.769, and those in Walenrang averaging 0.752. Within the schools, there was no difference in average success index score by gender. The only statistical difference in scores by grade occurred in Walenrang, where those in grade 12 had a score slightly above 0.8 (p=.00813).

Table 1.8.3 - Factors Important to Future Success among Students, Pooled Sample (%)					
	Not at all	**A little**	**Moderately**	**Very**	**Absolutely**
Getting a good education			3%	84%	13%
Getting married	10%	24%	28%	28%	10%
Making a lot of money	1%	2%	17%	67%	13%
Volunteering in your community		4%	24%	62%	10%
Becoming a strong leader	4%	10%	23%	52%	11%
Sharing your resources with others	1%	2%	9%	74%	14%
Demonstrating honesty and integrity		2%	9%	67%	22%
Being faithful to your religion	1%	1%	2%	63%	33%
Loving your family	1%	1%	2%	62%	34%
Providing advice and mentoring others		3%	22%	65%	10%
Owning a lot of land	4%	15%	35%	38%	8%

2.0 SMK Student Profile - External Assets

2.1 Peer Support

Large proportions of youth in each of the three schools exhibited evidence of supportive peer relationships. However, compared to youth respondents in Bone Bone and Tomoni, somewhat fewer youth in Walenrang reported having friends who stand by them in difficult times (p=.0108) or have a friend that they can always rely on (p=.0219). While there were no differences in response patterns by class in school, Table 2.1 shows gender was associated with responses to one item. In Walenrang, a lower proportion of girls strongly agreed or agreed that they had a friend they could always depend on, compared to boys (59% versus 73%, p=.0418).

Table 2.1 - Peer Support among students, by School (%)			
	Bone Bone (n=207)	**Tomoni (n=202)**	**Walenrang (n=195)**
I feel supported by my friends.			
Strongly disagree	1%	2	2%
Disagree	1%	2	1%
Neither agree nor disagree	16%	13%	12%
Agree	59%	59%	56%
Strongly agree	23%	24%	29%
My friends stand by me in difficult times.*			

Strongly disagree	1%	1%	3%
Disagree	1%	1%	1%
Neither agree nor disagree	16%	18%	21%
Agree	62%	55%	43%
Strongly agree	20%	26%	32%
I have a friend in my life that I can I always depend on.*			
Strongly disagree	1%	2%	7%
Disagree	6%	5%	8%
Neither agree nor disagree	14%	18%	17%
Agree	56%	53%	44%
Strongly agree	23%	22%	24%
*p<.05			

2.2 Family Support

Most student respondents indicated supportive relationships with their parents and family, regardless of school attended, although there were some variations in response patterns by school and, within school, by gender or grade (Table 2.2). More than 90% in each school reported that their family stands by them in difficult times. While 75% of those in Walenrang and 77% in Bone Bone indicated that they talk to their family about their conditions, upwards of 86% in Tomoni reported the same. There were some statistical differences on this item by class in Bone Bone and Walenrang (p=.0103 and p=.0341, respectively; data not shown).

The vast majority of respondents in each school agreed or strongly agreed that their parents often ask about their situation, although there were some differences by school (p=.0143). In Bone Bone, responses deviated somewhat by grade (p=.0416). Most students reported that they were comfortable sharing their views and feelings with their parents. In Walenrang, somewhat higher proportions of girls strongly agreed or agreed that they were comfortable sharing, compared to boys (79% versus 71%, respectively; p =.00551).

A minority indicated that their parents never support them. While there were statistical differences on this item by school, this might be attributed to difficulty answering a negatively worded item.

Table 2.2 – Family Support among students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
My family stands by me in difficult times.			
Strongly disagree	1%		1%
Disagree	1%	1%	2%
Neither agree nor disagree	5%	2%	7%
Agree	43%	39%	33%
Strongly agree	50%	58%	57%
I talk to my family about my conditions.*			
Strongly disagree	1%	1%	2%
Disagree	2%	2%	3%
Neither agree nor disagree	20%	12%	20%
Agree	46%	47%	34%
Strongly agree	31%	38%	41%

My parents oftentimes ask about my conditions/situations.*			
Strongly disagree			2%
Disagree	1%	1%	2%
Neither agree nor disagree	10%	4%	9%
Agree	44%	43%	34%
Strongly agree	45%	53%	53%
My parents/guardians never support me in the things I want to do.*			
Strongly disagree	27%	30%	24%
Disagree	36%	38%	30%
Neither agree nor disagree	17%	16%	16%
Agree	13%	13%	17%
Strongly agree	7%	3%	13%
I am usually comfortable to share my views and feelings with my parents.			
Strongly disagree	2%	2%	4%
Disagree	5%	3%	4%
Neither agree nor disagree	21%	15%	19%
Agree	45%	47%	38%
Strongly agree	27%	33%	35%
*p<.05			

2.3 Other Support

On measures gauging other sources of support (community and adults), most students exhibited answered affirmatively. However, compared to those in Bone Bone and Walenrang, those in Tomoni more often agreed or strongly agreed that they know where to go in their community for help (p<.001), that there is an adult they can always depend on (p<.001), and there is a trusted adult who can offer advice and guidance (p=.0156).

There were statistical differences by grade in Tomoni (p=.00755) and Walenrang (p=.0157) on the item regarding whether the youth had an adult on whom they could always depend, but these differences were inconsistent (Table 2.3). On the same item, in Walenrang, 39% of girls agreed or strongly agreed, versus 19% of boys (p=.0161). In Bone Bone, girls more often agreed they had an adult in their life who was trusted to offer advice and guidance (p=.0467; data not shown).

Table 2.3 – Other Types of Support among students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
I know where to go in my community to get help.* **			
Strongly disagree	1%		4%
Disagree	3%	1%	4%
Neither agree nor disagree	22%	14%	28%
Agree	48%	59%	44%
Strongly agree	26%	26%	22%
I have an adult in my life that I can always depend on.* **			
Strongly disagree	2%	2%	8%
Disagree	11%	5%	14%
Neither agree nor disagree	26%	17%	26%
Agree	45%	54%	33%

Strongly agree	16%	22%	19%
You have an adult in your life that you can trust to offer you advice and guidance.*			
Strongly disagree		1%	3%
Disagree	2%		2%
Neither agree nor disagree	16%	8%	15%
Agree	51%	56%	45%
Strongly agree	31%	35%	35%
*p<.05 ***p<.001			

2.4 Social Trust (safety)

On a variety of statements measuring feelings of trust, sizeable proportions of youth were ambivalent and indicated neither agreement or disagreement. That said, the remaining generally reported feelings of trust. There were no statistical associations in trust by school, and few differences by gender or class in school (Table 2.4).

Many students indicated they could generally trust most people. Within the three schools, response patterns did not deviate by gender. The only association by grade was within Tomoni, where those in Grade 12 tended to report "agree" more frequently than those in grades 10 or 11 (p=.02, data not shown).

Approximately one-half of respondents in each school said that they trust the people they go to school with. In Bone Bone, youth in grades 10 and 11 tended to report higher levels of agreement on this item than those in grade 12 (p=.0273, data not shown). In Walenrang, higher proportions of boys tended to report agreement than girls (p=.00928, data not shown).

Many students reported trusting the people they hang out with (their friends) and, similarly, many trusted that village authorities would consider the best interest of the youth if they had a problem. More than one-half of respondents in each school believed their neighbors would help them if needed. The vast majority trusted their parents to do what was best for them. Within schools, there were some statistical differences in response patterns by respondent gender. Where such associations existed, the girl respondents tended to neither agree nor disagree with the measure of trust, while the boys were much more inclined to agree or strongly agree (data not shown).

Table 2.4 - Social Trust among students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
In general, I can trust most people.			
Strongly disagree			
Disagree	2%	7%	4%
Neither agree nor disagree	57%	49%	54%
Agree	37%	39%	37%
Strongly agree	4%	5%	5%
I do not trust people in my community.			
Strongly disagree			
Disagree	14%	17%	13%
Neither agree nor disagree	39%	39%	46%
Agree	44%	39%	34%
Strongly agree	3%	5%	7%

I trust people that I go to school with.			
Strongly disagree			
Disagree	1%	1%	3%
Neither agree nor disagree	48%	51%	43%
Agree	45%	43%	44%
Strongly agree	6%	5%	10%
I trust people I hang out with.			
Strongly disagree			
Disagree	4%	4%	7%
Neither agree nor disagree	51%	49%	48%
Agree	38%	40%	38%
Strongly agree	7%	7%	7%
I trust that village authorities would look out for my best interests if I went to them with a problem.			
Strongly disagree			
Disagree	8%	11%	12%
Neither agree nor disagree	47%	45%	38%
Agree	37%	37%	38%
Strongly agree	8%	7%	12%
I trust my parents/guardians to do what is best for me.			
Strongly disagree			
Disagree			1%
Neither agree nor disagree	4%	1%	5%
Agree	44%	38%	33%
Strongly agree	52%	61%	61%
My neighbors would help me if I really needed help.			
Strongly disagree			
Disagree	4%	4%	5%
Neither agree nor disagree	29%	31%	29%
Agree	55%	55%	49%
Strongly agree	12%	10%	17%

2.5 Community Cohesion

Generally there was high agreement across the three sites that community members care about each other. While there were statistical associations between presence of community trust and school ($p = 0.0487$), this was largely driven by differences in the proportion who agreed versus strongly agreed that people in the community generally trust one another (Table 2.5). In Tomoni, a higher proportion of students strongly agreed compared to Bone Bone and Walenrang. Within the schools, there were no associations between grade or gender and the community cohesion items.

Table 2.5 - Perceptions of Community Cohesion among students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
People in my community care about each other.			
Strongly disagree			
Disagree	2%	4%	3%
Neither agree nor disagree	30%	23%	23%

Agree	49%	54%	49%
Strongly agree	19%	19%	25%
Everyone in my community just worries about him or herself, not other community members.			
Strongly disagree			
Disagree	47%	47%	56%
Neither agree nor disagree	33%	34%	23%
Agree	15%	16%	17%
Strongly agree	5%	3%	4%
People in my community generally trust one another.*			
Strongly disagree			
Disagree	4%	5%	4%
Neither agree nor disagree	38%	32%	34%
Agree	46%	54%	42%
Strongly agree	12%	9%	20%
*p<.05			

2.6 Leadership and Empowerment

There appear to be a subset of youth in each school who frequently lead in groups at school and extracurricular activities. Across schools there were few statistical differences in response pattern on four items measuring the extent to which youth exhibited leadership traits. Responses show that there are a subset of youth in each school who frequently lead in groups at school and in extracurricular settings and who organize their schoolmates to get things done. However, there are also sizeable groups of students who infrequently demonstrate leadership, such as the 45% in Walenrang, 53% in Tomoni, and 56% in Bone Bone who said they almost never are a leader in groups at school (Table 2.6.1).

Interestingly, in each of the three schools, large proportions of youth reported that they liked solving problems on their own rather than waiting for someone else. However, there were statistical differences between the schools (p=.0149). For example, in Walenrang, about 18% of youth strongly agreed that they preferred to solve problems, compared to 11% in Tomoni and 10% in Bone Bone. On the other hand, similar proportions of respondents in each school (ranging from 17% to 19%) indicated a preference for waiting for others to solve problems.

Within schools, responses were not statistically associated with gender or grade, with one exception. In Walenrang, responses deviated somewhat by class on the item regarding ability to organize schoolmates (p=.0213, data not shown).

Table 2.6.1 Leadership Traits of students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
I am a leader in groups in school.			
Almost never	56%	53%	45%
Once in a while	16%	21%	19%
Sometimes	17%	16%	20%
Often	8%	7%	12%
Always	3%	3%	4%
I can usually organize my schoolmate to get things done.			

Almost never	18%	11%	15%
Once in a while	25%	28%	25%
Sometimes	39%	36%	41%
Often	12%	19%	14%
Always	6%	6%	5%
My friends naturally rely on me to provide leadership in social events outside the school.			
Almost never	10%	7%	16%
Once in a while	24%	31%	23%
Sometimes	40%	36%	36%
Often	15%	17%	16%
Always	11%	9%	9%
I like solving problems myself rather than having to wait for someone else to do it.*			
Strongly disagree	3%	5%	8%
Disagree	14%	13%	11%
Neither agree nor disagree	38%	26%	27%
Agree	35%	45%	36%
Strongly agree	10%	11%	18%
*p<.05			

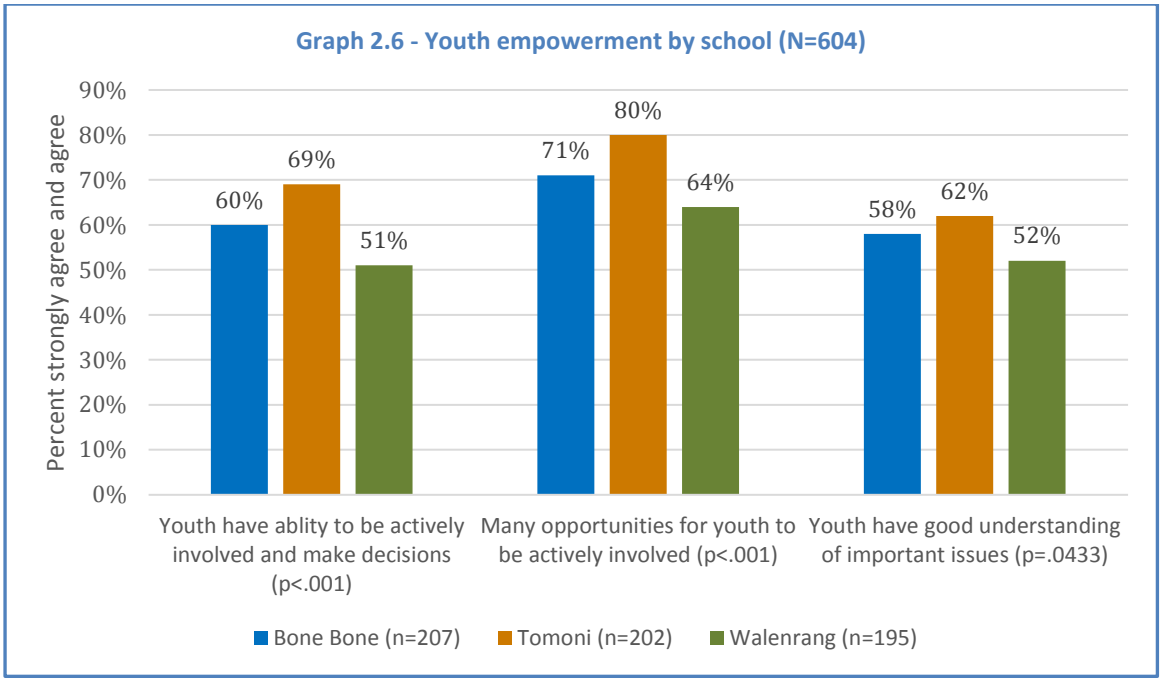
While there were statistical associations between some measures of youth empowerment and school, the majority of students believed that it is important to keep abreast of activities in the community and that young people do have a good understanding of important issues affecting their community or school. The majority of youth respondents in each school indicated there were opportunities for young people to express their opinions and be actively involved in the neighborhood or school. Moreover, a majority believed that youth possessed the ability to be involved and make decisions about their neighborhood or school. However, the majority were either unsure or disagreed with the notion that community leaders or school officials would listen to them (Table 2.6.2).

Table 2.6.2 Youth Empowerment among students, by School (%)			
	Bone Bone (n=207)	**Tomoni (n=202)**	**Walenrang (n=195)**
Many activities in my community/neighborhood are important to follow (keep abreast of).			
Strongly disagree	1%	3%	3%
Disagree	5%	5%	6%
Neither agree nor disagree	32%	28%	29%
Agree	47%	53%	46%
Strongly agree	15%	11%	16%
I think young people here have a good understanding of the important issues that occur in the environment/community or school.*			
Strongly disagree	1%	4%	6%
Disagree	2%	5%	6%
Neither agree nor disagree	38%	30%	36%
Agree	48%	50%	38%
Strongly agree	11%	11%	14%

There are opportunities for youth like me to express opinions about neighborhood or school life.			
Yes	92%	95%	89%
No	8%	5%	11%
There are many opportunities for young people like me to be actively involved in the neighborhood or school.* **			
Strongly disagree	1%	4%	6%
Disagree	4%	2%	4%
Neither agree nor disagree	24%	14%	26%
Agree	50%	65%	46%
Strongly agree	21%	15%	18%
I think young people here have the ability to be actively involved in activities in the neighborhood or school and make decisions.* **			
Strongly disagree	1%	2%	5%
Disagree	3%	3%	8%
Neither agree nor disagree	36%	27%	36%
Agree	49%	58%	34%
Strongly agree	11%	10%	17%
Most of the community leaders here or teachers and principals are willing to listen to me.			
Strongly disagree	3%	4%	7%
Disagree	10%	11%	9%
Neither agree nor disagree	50%	48%	50%
Agree	30%	32%	25%
Strongly agree	7%	5%	9%
***p<.001			

On the three items for which there were statistical associations between empowerment and school (Graph 2.6), Tomoni consistently had more youth indicating that youth were empowered compared to Bone Bone and Walenrang. For example, 69% of respondents in Tomoni said youth had the ability to be actively involved and make decisions, compared to 60% in Bone Bone and 51% in Walenrang ($p<.001$). While 80% of in-school respondents in Tomoni strongly agreed or agreed that there were many opportunities for youth to be actively involved, just 71% in Bone Bone and 64% in Walenrang reported the same ($p<.001$). In Tomoni, 62% of in-school respondents indicated that youth have a good understanding of important issues, versus 58% in Bone Bone and 52% in Walenrang ($p=.0433$).

Within each school, there tended not to be statistical associations between the measures of youth empowerment and gender or grade in school. The one exception was the item measuring the perception that youth have the ability to be actively involved and make decisions. In Bone Bone and in Walenrang there were statistical associations by gender. In Bone Bone, girls were more inclined than boys to report neither agreeing nor disagreeing with that perception ($p=.0204$, data not shown). In Walenrang, girls tended to agree to that perception at a higher frequency than boys ($p=.0267$, data not shown).



2.7 Perceived Community Engagement

The majority of students perceived community engagement to be important, and many similarly believed that they could make a difference in their community if they tried hard. Most perceived that youth had the power to make a positive impact in their community or in their school (Table 2.7). However, a higher proportion of those in Tomoni strongly agreed or agreed that youth had the power to make a positive difference in their school, compared to Bone Bone and Walenrang (p=.00563). While more than one-half in each school thought youth opinions were heard and respected by academic personnel, fewer believed that respected adults in the community heard and respected youth opinions.

Within schools, there were no statistical relationships between class and these measures of perceived youth engagement. Gender differences existed on two of these measures. In Walenrang, girls were more likely to strongly agree or agree that were boys that youth had the power to make a positive impact in their community (p=.0025; data not shown). In Tomoni, girls more frequently strongly agreed or agreed that youth opinions were heard and respected by teachers and administrators at school (p = .0334; data not shown).

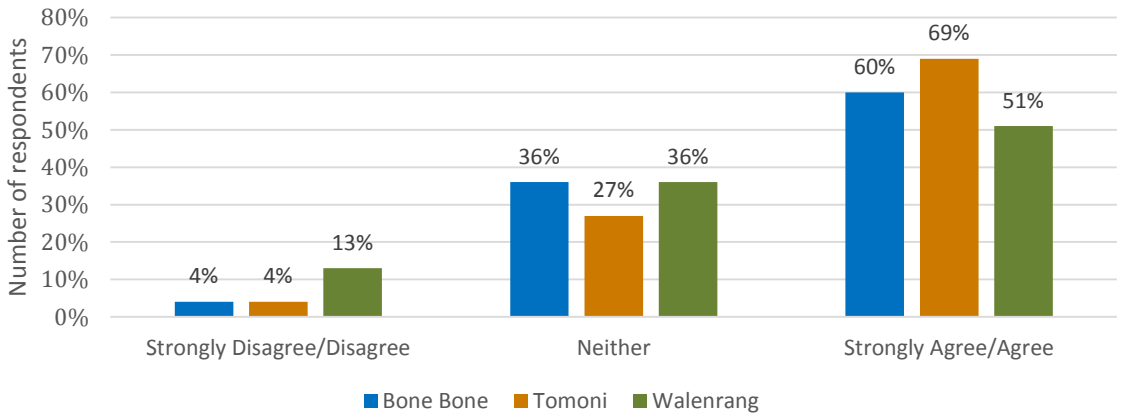
Table 2.7 Perceptions of Community Engagement among students, by School (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
I think it is important to actively be involved in my community.			
Strongly disagree	1%	1%	2%
Disagree	2%	2%	3%
Neither agree nor disagree	16%	14%	19%
Agree	65%	66%	50%
Strongly agree	16%	17%	26%
If you try hard, you can make a difference in your community.			
Strongly disagree		3%	3%
Disagree	2%	4%	3%
Neither agree nor disagree	20%	13%	20%

Agree	54%	56%	47%
Strongly agree	24%	24%	27%
In my community, youth have the power to make a positive impact.			
Strongly disagree	1%	2%	2%
Disagree	4%	2%	4%
Neither agree nor disagree	34%	27%	29%
Agree	45%	47%	39%
Strongly agree	18%	22%	26%
In my community, youth opinions are heard and respected by adults.			
Strongly disagree	3%	4%	3%
Disagree	7%	7%	12%
Neither agree nor disagree	47%	37%	36%
Agree	35%	40%	35%
Strongly agree	8%	12%	14%
In my school, youth have the power to make a positive impact.**			
Strongly disagree	3%	3%	2%
Disagree	3%	4%	5%
Neither agree nor disagree	34%	20%	34%
Agree	44%	56%	38%
Strongly agree	16%	17%	21%
In my school, youth opinions are heard and respected by teachers and administrators.			
Strongly disagree	2%	5%	5%
Disagree	4%	3%	5%
Neither agree nor disagree	29%	22%	34%
Agree	49%	54%	39%
Strongly agree	16%	16%	17%
**p<.01			

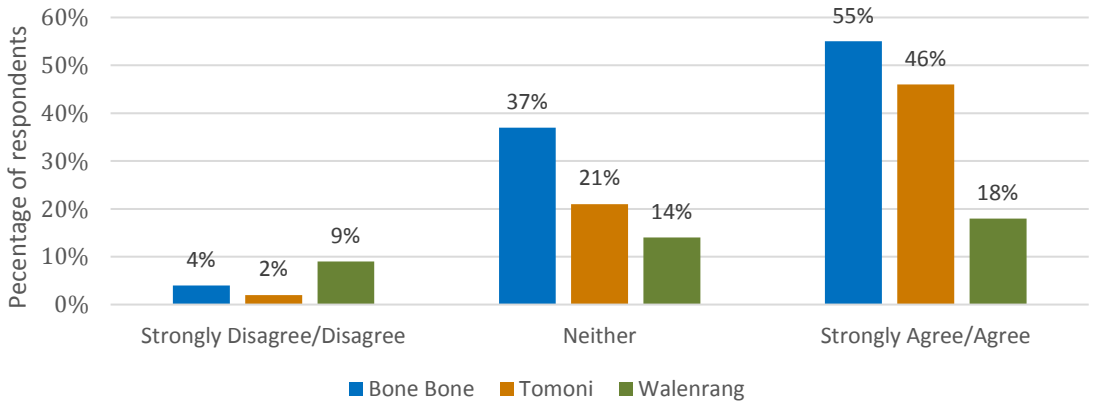
While most students believe that they have some measure of power in the community through an ability to become involved in the community, this was not uniform throughout the towns, with Walenrang showing less of this belief than the other two towns (Graph 2.7.1).

Graph 2.7.1 - Response: Young people have the ability to become active in their community (N=604)

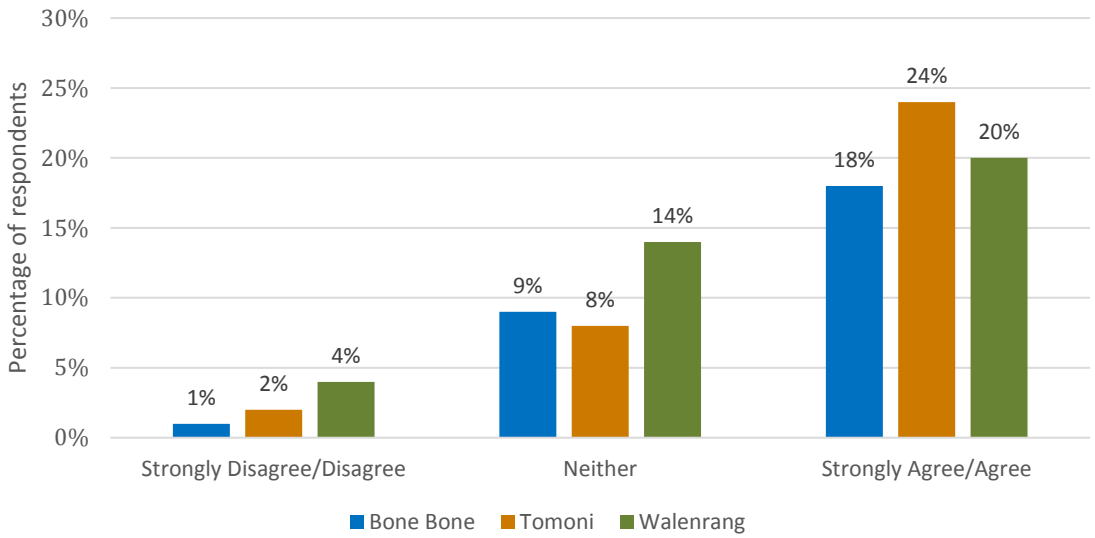


The graphs below split this further, showing (Graph 2.7.2) the breakdown for just those respondents that are staying in town after graduating, and then (Graph 2.7.3) showing those that are leaving after graduation.

Graph 2.7.2 - Response: Young people have the ability to become active in their community, those staying (n=206)



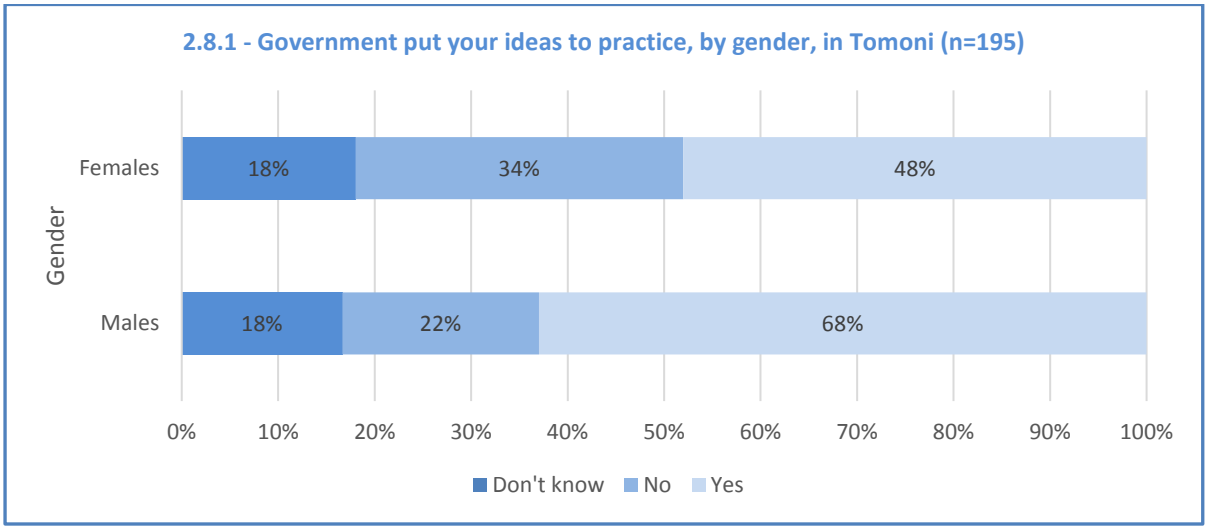
Graph 2.7.3 - Response: Young people have the ability to become active in their community, those leaving (n=398)

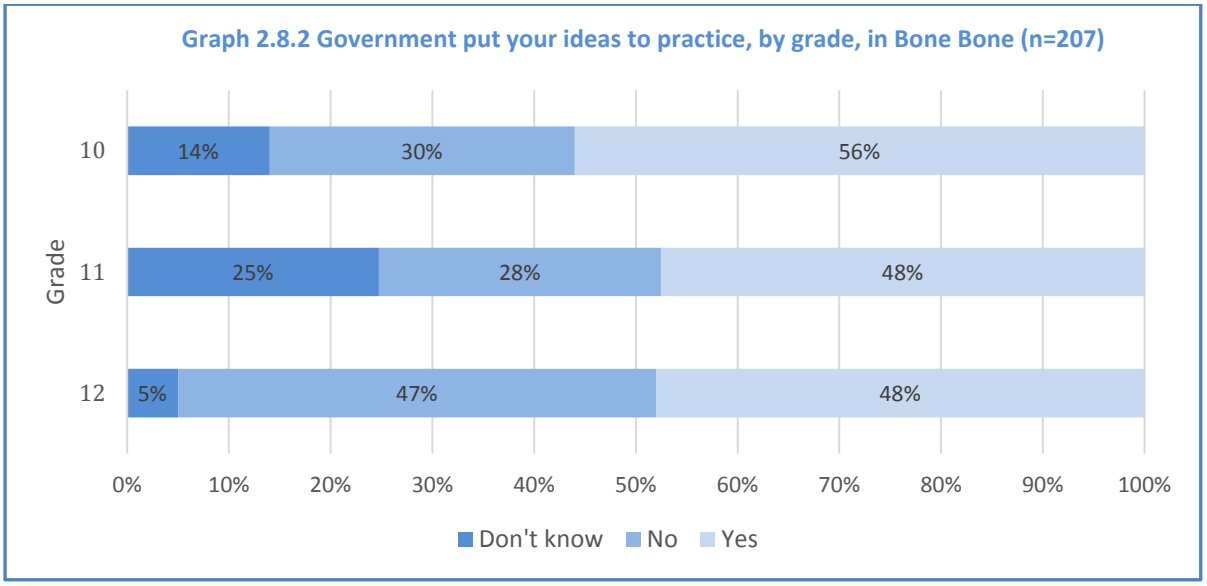


2.8 Actual Community Engagement

The majority of respondents indicated that local government officials had not sought their opinions or ideas in the prior year. When government officials had asked for youth input, there was deviation by school in whether youth felt their ideas were put into practice (p=.00446). While at least one-half in Bone Bone and Tomoni through their ideas were put into practice, just 39% in Walenrang reported the same (Table 2.8). There also were some differences within schools by gender and grade. In Bone Bone, a higher proportion of those in Grade 10 thought their ideas were put into practice (Graph 2.8.1), while in Tomoni, girls were more inclined to believe the same (Graph 2.8.2) (p=.0143 and p=.0156, respectively).

Table 2.8 Actual Community Engagement among students, by School (%)			
	Bone Bone (n=207)	**Tomoni (n=202)**	**Walenrang (n=195)**
In the last year, has the village or sub-district government asked for your opinions and ideas?			
Yes	14%	10%	15%
No	86%	90%	85%
The last time the local government asked for your opinions and ideas, do you feel your ideas were then put into practice?**			
Yes	51%	58%	38%
No	34%	28%	40%
Don't Know	15%	14%	22%
**p<.01			





3.0 SMK Alumni Profile - Internal Assets

3.1 Agency

Alumni reported high degrees of agency with regard to education and occupation decisions and the least control over decisions related to marriage, friends, and receipt of

money. Agency, or the capacity of an individual to make his or her own choices independently, was measured using seven items inquiring about the level of control that each respondent had with regard to decisions concerning marriage, friends, education, occupation, spending money, receiving money, and use of time. Responses were scored on a four-point scale indicating no control, little control, some control, or a lot of control.

The only statistical difference between alumni in Bone Bone and Walenrang occurred on the item measuring control over money use (p=.00391). Overall, respondents indicated that they had the most control over decisions regarding education, occupation, and use of time. The areas in which alumni reported the least degree of agency were with regard to marriage and friends (Table 3..

By site, gender was not statistically associated with perceived control on any of the decisions. Age was associated with perceived agency over marriage and education in Bone Bone (p=.0153 and p=.045, respectively). In both cases, youth age 21 and older reported "a lot of control" at much higher proportions than did youth aged 17 to 20 years.

Table 3.1 - Perceived Agency of Alumni, by School (%)		
	Bone Bone (n=64)	**Walenrang (n=37)**
Marriage		
No control	30%	22%
A little control	22%	8%
Some control	20%	27%
A lot of control	28%	43%
Friends		
No control	31%	30%
A little control	25%	30%
Some control	24%	16%
A lot of control	20%	24%
Education		
No control	11%	11%
A little control	23%	14%
Some control	30%	24%
A lot of control	36%	51%
Receiving money		
No control	27%	8%
A little control	21%	24%
Some control	30%	41%
A lot of control	22%	27%
Using money**		
No control	13%	14%
A little control	33%	8%
Some control	19%	48%
A lot of control	35%	30%
Occupation		
No control	16%	14%
A little control	16%	11%
Some control	28%	18%
A lot of control	40%	57%
Use of time		
No control	17%	19%
A little control	11%	5%

Some control	27%	22%
A lot of control	45%	54%

3.2 Internal Locus of Control

The vast majority of alumni agreed or strongly agreed that trying hard would improve life situations. On a five-point scale, ranging from strongly agree to strongly disagree, one item measured the extent to which respondents had an internal locus of control—that is, the belief that one's life can be controlled. There were no statistical associations by site or, within sites, by gender or age (Table 3.2).

Table 3.2 - Internal Locus of Control among Alumni, by School (%)

	Bone Bone (n=64)	Walenrang (n=37)
If you try hard, you can improve your situation in life?		
Strongly disagree	9%	3%
Disagree	2%	
Neither agree nor disagree	5%	
Agree	22%	32%
Strongly agree	62%	65%

3.3 Problem Solving

Alumni reported trying to think of different ways to fix problems but minimally asking others for help. Two items asked alumni to identify a problem or difficulty they had faced in the last week and then describe to what extent they had tried to think of different solutions and had asked other people for help or ideas to fix the problem. In both communities it was most common for alumni to report that they had tried "a lot" to think of different ways to fix the problem, and alumni also most frequently said that they only asked other people for help "a little" (Table 3.3). There were no statistical associations between site and problem solving actions.

Table 3.3 – Problem Solving among Alumni, by School (%)

	Bone Bone (n=64)	Walenrang (n=37)
Think of the problems/difficulties you faced in last week. To what extent did you try to think of different ways to change the problem or fix the situation?		
Not at all	9%	11%
A little	22%	29%
A lot	69%	60%
Think of the problems/difficulties you faced in last week. To what extent did you ask other people for help or for ideas about how to make the problem better?		
Not at all	6%	11%
A little	53%	57%
A lot	41%	32%

*p<.05 **p<.01 ***p<.001

Within each site, there was no statistical association in response patterns by gender. However, within Walenrang, there was an association between age and the extent to which respondents

asked other people for help (p<.001). Whereas 64% of youth age 21 and above asked others for help "a lot", 83% of younger youth asked others for help "a little".

3.4 Critical Thinking

Most alumni expressed difficulty with critical thinking tasks including separating true and false information, finding new ways of looking at a situation, and linking facts together. There were no statistical associations between critical thinking tasks and site or, within site, by gender or age (Table 3.4).

Table 3.4 – Critical Thinking among Alumni, by School (%)

	Bone Bone (n=64)	Walenrang (n=37)
When you hear about something that happened in your community, how easy is it for you to: Separate the true and false aspects of things?		
Very easy	5%	11%
Somewhat easy	28%	27%
Somewhat difficult	36%	40%
Very difficult	31%	22%
When you hear about something that happened in your community, how easy is it for you to: Find new ways of looking at the situation?		
Very easy	6%	16%
Somewhat easy	17%	11%
Somewhat difficult	44%	43%
Very difficult	33%	30%
When you hear about something that happened in your community, how easy is it for you to: Link facts together?		
Very easy	6%	16%
Somewhat easy	20%	11%
Somewhat difficult	50%	46%
Very difficult	24%	27%

*p<.05 **p<.01 ***p<.001

3.5 Conflict Resolution

Generally, alumni tend to take one of two approaches to conflict resolution, regardless of where the conflict occurs. They most commonly described trying to compromise or presenting their point of view. There were some statistical differences in approach taken by school attended, depending on the type of conflict (Table 3.5). For example, compromise was more commonly reported in Bone Bone than in Walenrang in conflict at school (p=.0135) and conflict in the neighborhood (p=.0304).

Within each site, there were no gender differences in approach to conflict resolution. While age also tended not to matter, in Bone Bone the vast majority of younger alumni tried compromise for neighborhood conflict, while older youth used a variety of tactics (p=.00704).

Table 3.5 Methods of Conflict Resolution among Alumni, by School (%)

		Bone Bone (n=64)	Walenrang (n=37)
Home	Ask others	5%	5%
	Back out	2%	3%
	Present view	23%	30%
	Stand by principles	8%	5%
	Try compromise	62%	57%

Friends	Ask others	5%	11%
	Back out	2%	3%
	Present view	27%	37%
	Stand by principles	14%	11%
	Try compromise	52%	38%
School*	Ask others	6%	30%
	Back out	6%	8%
	Present view	34%	32%
	Stand by principles	13%	3%
	Try compromise	41%	27%
Neighborhood*	Ask others	6%	30%
	Back out	5%	5%
	Present view	22%	14%
	Stand by principles	9%	5%
	Try compromise	58%	46%

*p<.05 **p<.01 ***p<.001

3.6 Pro-Social behavior

Regardless of site, the majority of alumni reported that they like to ask others for their opinions and try to find ways to cooperate. A separate item assessed the extent to which respondents believed it is more important to get along than it is to win an argument (Table 3.6). While a majority of alumni agreed or strongly agreed with this statement, about one-quarter disagreed. Within each school, there were no statistical associations between these two items and respondent gender or age.

Table 3.6 - Prosocial Behavior among Alumni, by School (%)

	Bone Bone (n=64)	Walenrang (n=37)
I like to ask others for their opinions and try to find ways to cooperate.		
Strongly disagree	2%	3%
Disagree		3%
Neither agree nor disagree	5%	3%
Agree	63%	64%
Strongly agree	30%	27%
In general, I think it is more important to get along than to win an argument.		
Strongly disagree	8%	3%
Disagree	17%	22%
Neither agree nor disagree	8%	8%
Agree	54%	60%
Strongly agree	13%	8%

3.7 Belief in the Future

A majority of alumni have a positive outlook on the future. One item assessed the extent to which respondents believed that applying oneself at school would result in a better job. On a five point scale, ranging from strongly agree to strongly disagree, respondents were asked: "If you study hard at school you will be rewarded by a better job in the future." The majority of alumni respondents agreed or strongly agreed with this statement, and there were no statistical associations by school (Table 3.7.1). However, a few alumni from each school disagreed or

strongly disagreed that studying hard would result in a better job. Within schools, responses were not statistically associated with gender or age.

Table 3.7.1 - Future Results of Studying Hard among Alumni, by School (%)		
	Bone Bone (n=64)	**Walenrang (n=37)**
If you study hard at school you will be rewarded by a better job in future.		
Strongly disagree	11%	5%
Disagree	3%	
Neither agree nor disagree	6%	3%
Agree	22%	24%
Strongly agree	58%	68%

Alumni also were asked the likelihood of eight other events occurring in the next two to three years. The individual items are presented in Table 3.7.2 among the pooled sample of all alumni.

A hope index was created by assigning a value of 1=not likely, 2=somewhat likely, or 3=very likely to each item. For each respondent, their answers were summed across the nine items and then scaled between 0 and 1. Thus, a score around .33 indicates that the respondent was on average "Not Likely" to have a belief that the future will be good; a score around .66 indicates that the respondent was on average "Somewhat Likely" to have a belief that the future will be good; a score around .99 indicates that the respondent was on average "Very Likely" to have a belief that the future will be good.

On average, alumni in Bone Bone had a value of 0.503 on this scale, and those in Walenrang had a hope index score of 0.537. That is, they were somewhere in the middle of "Not Likely" and "Somewhat Likely" to believe that in the next few years good things relating to those nine factors will happen. There was no statistical difference in the average hope index score by school or considering gender. In statistical tests that considered alumni age, while age was a statistically significant factor (p=.00240) associated with higher hope index scores, the statistical tests indicated that it was not likely one of the most important contributors to hope index score.

Table 3.7.2 - Hope in Future among Alumni, Pooled Sample (%)			
	Not likely	**Somewhat likely**	**Very likely**
I will have positive relationships with my family	75%	25%	
I will have positive relationships with my friends	58%	41%	1%
I will have opportunities to continue my education	38%	58%	4%
I will be prosperous	39%	60%	1%
My family will be prosperous	47%	51%	2%
My environment will have progressed	34%	65%	1%
Indonesia will be prosperous	35%	64%	1%
Cocoa farming becomes more profitable	49%	49%	2%

Alumni also were asked how important each of 11 factors were to be successful in life, on a five-point scale ranging from not at all to absolutely important. The individual items are presented in Table 3.7.3 among the pooled sample of all alumni.

A success index was created by assigning a value of 1=not at all, 2=a little, 3=moderately, 4=very, and 5=absolutely to each response. For each respondent, their answers were summed across the 11 items and then scaled between 0 and 1. The success index values of alumni from the two sites

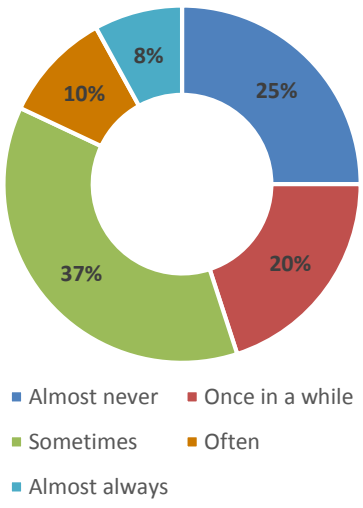
approximated 0.8 (Bone Bone = 0.812 and Walenrang = 0.775), meaning that the respondents on average viewed these factors to be "very" important for success. There was no statistical difference in the average success index score by school attended or considering age. In statistical tests that considered gender, gender had borderline statistical significance (p=.05001), with girls having somewhat lower success index scores than boys.

Table 3.7.3 - Factors Important to Future Success among Alumni, Pooled Sample (%)					
	Not at all	A little	Moderately	Very	Absolutely
Getting a good education	3%		6%	61%	30%
Getting married	1%		15%	55%	29%
Making a lot of money	4%		11%	65%	20%
Volunteering in your community	2%	2%	11%	70%	15%
Becoming a strong leader	3%	12%	30%	42%	13%
Sharing your resources with others	2%	2%	5%	69%	22%
Demonstrating honesty and integrity	3%	2%	2%	49%	44%
Being faithful to your religion	4%	2%	4%	40%	50%
Loving your family	3%	2%	2%	43%	50%
Providing advice and mentoring others	3%	1%	17%	59%	20%
Owning a lot of land	4%	9%	28%	48%	11%

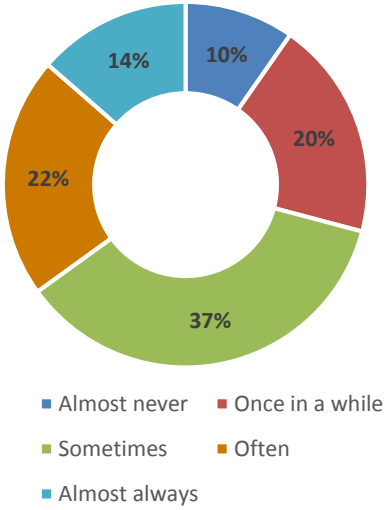
3.8 Alumni Leadership

The alumni did not tend to view themselves as "leaders" when in school, with the majority saying that they were not leaders in school. About half now claim to be leaders at work. These perspectives are demonstrated in Graphs 3.8.1 and 3.8.2.

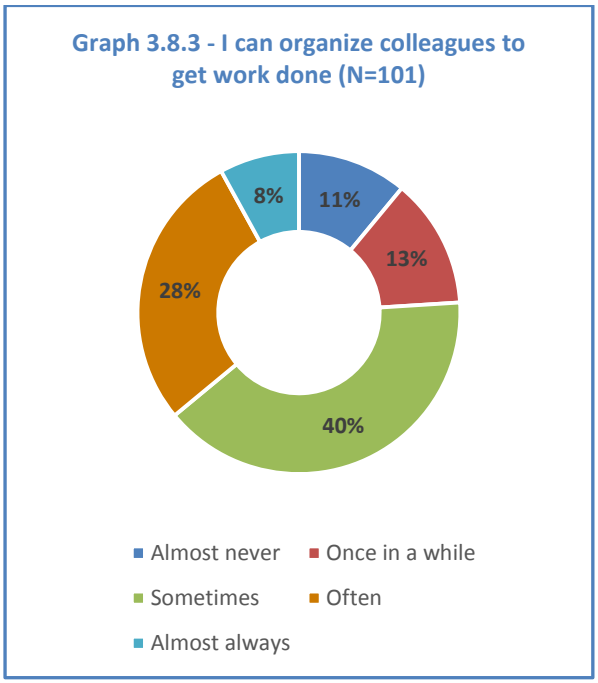
Graph 3.8.1 - I was often a leader at school (N=101)

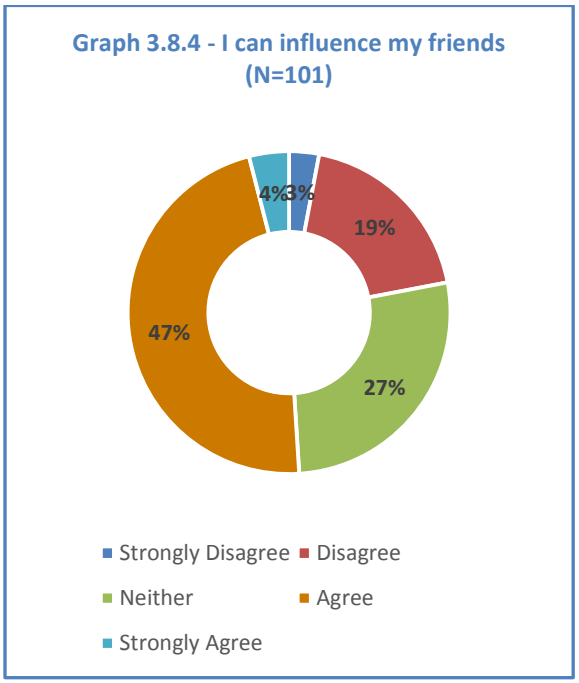


Graph 3.8.2 - My colleagues rely on me to provide leadership at work (N=101)

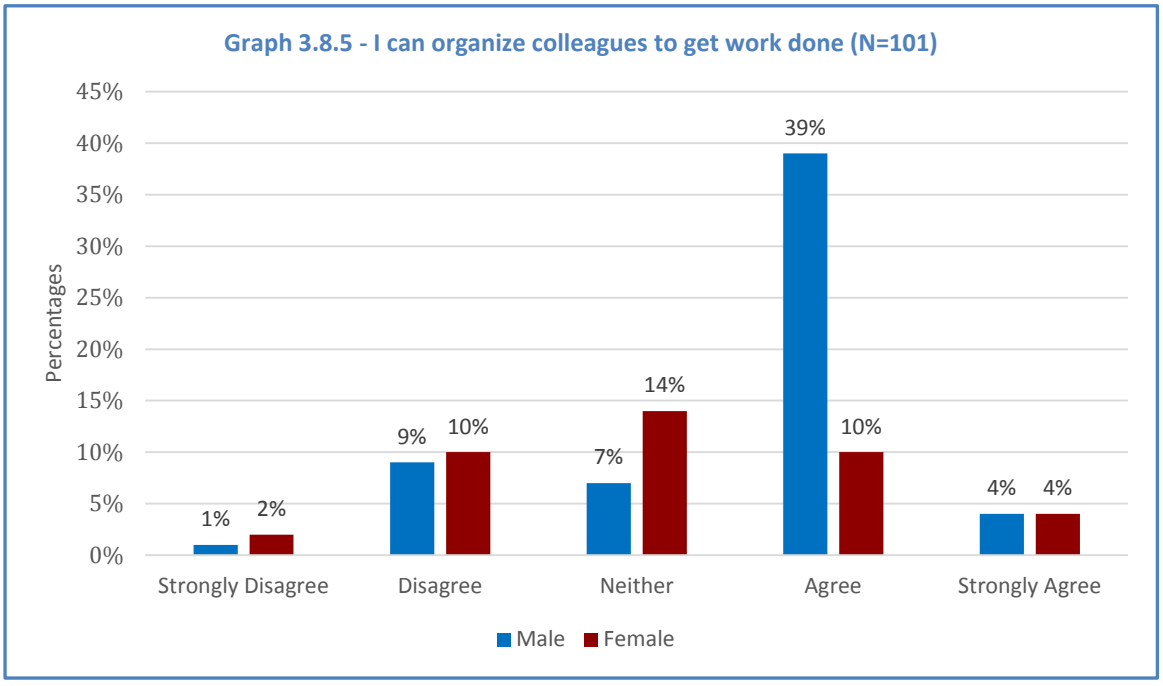


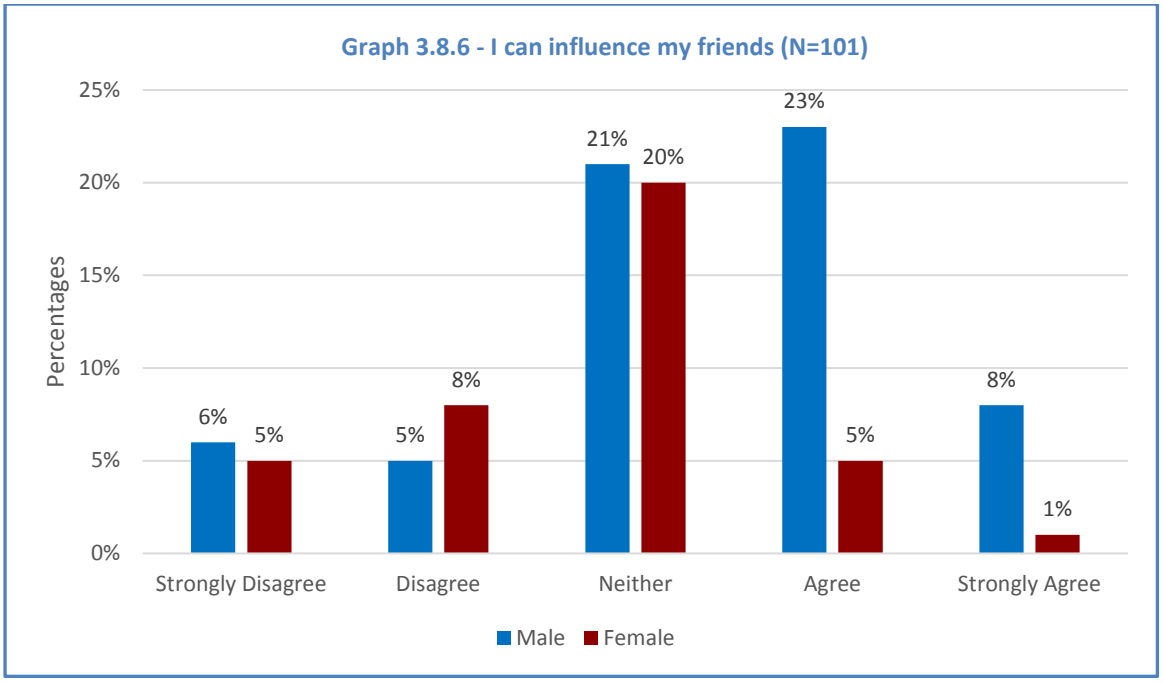
When asked about how they organize their co-works, or influence their friends (using questions that omit the word "leader") they responded with more positive feedback, with a plurality claiming that they can influence friends/colleagues (Graphs 3.8.3 and 3.8.4).



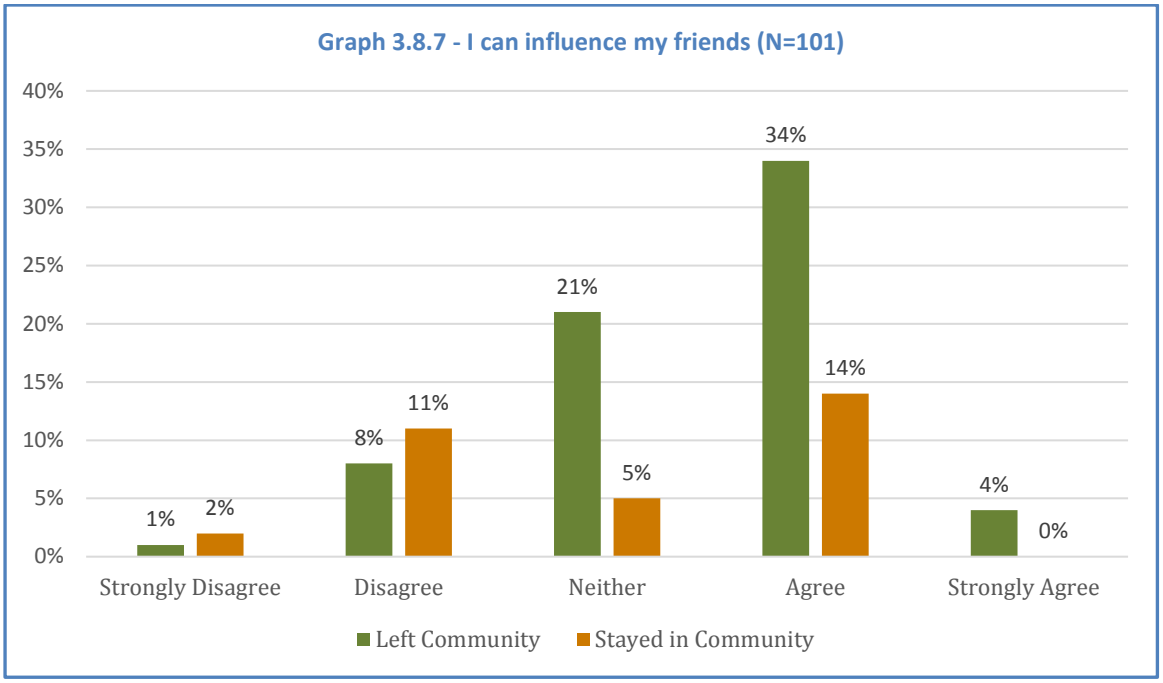


In this case, the responses were different for each gender, with males being more likely to believe that they can organize coworkers (Graph 3.8.5) an influence on their friends (Graph 3.8.6).





Similarly, those that claimed they could influence their friends were more likely to be ones that had gone elsewhere after graduation (Graph 3.8.7).



4.0 SMK Alumni Profile - External Assets

4.1 Peer Support

Most alumni report supportive peer relationships. On three items, the majority of alumni exhibited evidence of supportive peer relationships, and there were no statistical differences between sites (Table 4.1). Most respondents reported that they feel supported by their friends, their friends stand by them in difficult times, and they have a friend they can always rely on.

Within sites, answers tended to be independent of respondent gender or age, with one exception. In Walenrang, older alumni more typically agreed or strongly agreed that they feel supported by friends, while those age 17 to 20 years tended to neither agree nor disagree on that item (p=.0286; data not shown).

Table 4.1 - Peer Support among Alumni, by School (%)		
	Bone Bone (n=64)	**Walenrang (n=37)**
I feel supported by my friends.		
Strongly disagree	3%	5%
Disagree		3%
Neither agree nor disagree	10%	14%
Agree	64%	48%
Strongly agree	23%	30%
My friends stand by me in difficult times.		
Strongly disagree	2%	3%
Disagree	2%	3%
Neither agree nor disagree	9%	16%
Agree	60%	43%
Strongly agree	27%	35%
I have a friend in my life that I can I always depend on.		
Strongly disagree	2%	5%
Disagree	6%	8%
Neither agree nor disagree	9%	20%
Agree	64%	51%
Strongly agree	19%	16%

4.2 Family Support

Regardless of school attended, most alumni respondents indicated supportive relationships with their parents and family. Additionally, there were no statistical differences by age or gender, within the schools. On an item explicitly measuring parental support, most alumni answered that their parents do support them in the things they want to do (Table 4.2). More than 95% reported that their family stands by them in difficult times. There were 97% of alumni respondents in Walenrang and 88% in Bone Bone who indicated that they talk to their family about their conditions, and respondents were nearly unanimous that their parents often ask about their situation. Most alumni reported that they were comfortable sharing their feelings with their parents.

Table 4.2 - Family Support among Alumni, by School (%)		
	Bone Bone (n=64)	**Walenrang (n=37)**
My family stands by me in difficult times.		
Strongly disagree	2%	
Disagree		
Neither agree nor disagree	3%	3%
Agree	42%	37%
Strongly agree	53%	60%
I talk to my family about my conditions.		
Strongly disagree	2%	
Disagree	5%	

Neither agree nor disagree	6%	3%
Agree	42%	57%
Strongly agree	45%	41%
My parents oftentimes ask about my conditions/situations.		
Strongly disagree	2%	
Disagree		
Neither agree nor disagree	2%	
Agree	36%	49%
Strongly agree	60%	51%
My parents/guardians never support me in the things I want to do.		
Strongly disagree	20%	32%
Disagree	48%	43%
Neither agree nor disagree	10%	5%
Agree	9%	15%
Strongly agree	13%	5%
I am usually comfortable to share my views and feelings with my parents.		
Strongly disagree		
Disagree	3%	
Neither agree nor disagree	9%	5%
Agree	41%	57%
Strongly agree	47%	38%

4.3 Other Support

Besides friends and family, most alumni exhibited knowledge or presence of other sources of support. When asked whether they knew where to go in their community to get help, 92% in Bone Bone and 87% in Walenrang answered affirmatively. Most also reported that there is an adult they can always depend on, and there is a trusted adult who can offer advice and guidance (Table 4.3). Responses to these items were independent of school attended or, within schools, by alumni gender or age.

Table 4.3 - Other Types of Support among Alumni, by School (%)

	Bone Bone (n=64)	Walenrang (n=37)
I know where to go in my community to get help.		
Strongly disagree		
Disagree	2%	3%
Neither agree nor disagree	6%	11%
Agree	69%	62%
Strongly agree	23%	24%
I have an adult in my life that I can always depend on.		
Strongly disagree	2%	
Disagree	8%	11%
Neither agree nor disagree	14%	19%
Agree	52%	46%
Strongly agree	24%	24%
You have an adult in your life that you can trust to offer you advice and guidance.		
Strongly disagree	2%	
Disagree	3%	
Neither agree nor disagree	13%	5%
Agree	59%	70%
Strongly agree	23%	25%

4.4 Social Trust (safety)

Among non-neutral respondents, most reported feelings of social trust. Noteworthy proportions of alumni indicated neither agreement nor disagreement on a variety of statements measuring feelings of trust, independent of school attended (Table 4.4). Among those remaining, most reported feelings of trust, with few differences by alumni age or gender. For example, more than one-half indicated they could generally trust most people, and response patterns did not deviate by gender. In Walenrang, alumni age 21 years and older more frequently indicated neither agreement nor disagreement to this statement, compared to those age 17 to 20 years (p=.0434; data not shown).

Approximately one-half of respondents trust the people they hang out with and, similarly, many trusted that village authorities would consider the respondent's best interest if they had a problem. On this latter item, within Walenrang, girls more often reported neither agreeing nor disagreeing, versus boys (p=.0443; data not shown). More than one-half of respondents believed their neighbors would help them if needed. The vast majority trusted their parents to do what was best for them.

Table 4.4 - Social Trust among Alumni, by School (%)

	Bone Bone (n=64)	Walenrang (n=37)
In general, I can trust most people.		
Strongly disagree		
Disagree	9%	5%
Neither agree nor disagree	36%	30%
Agree	52%	65%
Strongly agree	3%	
I trust people I hang out with.		
Strongly disagree		
Disagree	8%	8%
Neither agree nor disagree	41%	46%
Agree	43%	46%
Strongly agree	8%	
I trust that village authorities would look out for my best interests if I went to them with a problem.		
Strongly disagree		
Disagree	8%	11%
Neither agree nor disagree	52%	38%
Agree	35%	48%
Strongly agree	5%	3%
I trust my parents/guardians to do what is best for me.		
Strongly disagree		
Disagree	3%	8%
Neither agree nor disagree	2%	3%
Agree	40%	43%
Strongly agree	55%	46%
My neighbors would help me if I really needed help.		
Strongly disagree		
Disagree	6%	5%
Neither agree nor disagree	33%	36%
Agree	48%	54%
Strongly agree	13%	5%

4.5 Community Cohesion

Generally, there was high agreement across the sites that community members care about each other, with no statistical differences in responses between Bone Bone and Walenrang (Table 4.5). Most alumni indicated that people in their community care about each other. A minority agreed that everyone in the community worries only about themselves. More than one-half of alumni in each site suggested that community members trust each other.

Table 4.5 - Perceptions of Community Cohesion among Alumni, by School (%)		
	Bone Bone (n=64)	**Walenrang (n=37)**
People in my community care about each other.		
Strongly disagree		
Disagree	3%	5%
Neither agree nor disagree	33%	22%
Agree	52%	65%
Strongly agree	13%	8%
Everyone in my community just worries about him or herself, not other community members.		
Strongly disagree		
Disagree	42%	41%
Neither agree nor disagree	34%	35%
Agree	21%	22%
Strongly agree	3%	3%
People in my community generally trust one another.		
Strongly disagree		
Disagree	16%	14%
Neither agree nor disagree	39%	27%
Agree	40%	51%
Strongly agree	5%	8%

4.6 Leadership and Empowerment

A third of alumni respondents indicated their friends rely on them to provide leadership. In Walenrang and Bone Bone, there were no statistical differences in response pattern on items measuring the extent to which youth exhibited leadership traits (Table 4.6.1). Approximately a third in each site indicated their friends often or always rely on them to provide leadership in social events. While there were no differences in responses by gender, older alumni in Bone Bone more commonly indicated always being relied on compared to younger alumni (p=.00347; data not shown).

More than one-half of alumni agreed or strongly agreed that they liked solving problems on their own rather than waiting for someone else. In Bone Bone, there was a stark contrast in how youth of different ages answered this item. While 77% of those age 21 and older strongly agreed or agreed, only 38% of alumni below age 21 did the same (p=.0353). In Walenrang, boys and girls also answered this item differently. While 74% of girls strongly agreed or agree, only 43% of boys did the same (p=.0201). Regardless of age or gender, most alumni reported that they like to try new things that are challenging.

Table 4.6.1 – Leadership Traits of Alumni, by School (%)		
	Bone Bone (n=64)	**Walenrang (n=37)**
My friends naturally rely on me to provide leadership in social events outside the school.		
Almost never	14%	3%

Once in a while	14%	27%
Sometimes	34%	37%
Often	24%	19%
Always	14%	14%
I like solving problems myself rather than having to wait for someone else to do it.		
Strongly disagree	2%	8%
Disagree	16%	19%
Neither agree nor disagree	19%	11%
Agree	52%	51%
Strongly agree	11%	11%
I like trying new things that are challenging to me.		
Strongly disagree		3%
Disagree	3%	3%
Neither agree nor disagree	11%	19%
Agree	59%	64%
Strongly agree	27%	11%

A variety of items measured facets of youth empowerment, and for most of these, alumni from each school responded similarly. For example, similar majorities of alumni in Bone Bone and Walenrang believed that it is important to keep abreast of activities in the community. While most alumni indicated young people do have a good understanding of important issues affecting their community or school, there were more in Walenrang who disagreed with this statement (p=.0187), and in Walenrang these were more typically older youth who disagreed (p=.0119; data not shown).

Table 4.6.2 shows that nearly all of the alumni respondents indicated there were opportunities for young people to express their opinions, and most agreed that there were opportunities for youth to be actively involved in the neighborhood or school. While a majority believed that youth possessed the ability to be involved and make decisions about their neighborhood or school, the majority were either unsure or disagreed with the notion that community leaders or school officials would listen to them.

Table 4.6.2 – Youth Empowerment among Alumni, by School (%)

	Bone Bone (n=64)	**Walenrang (n=37)**
Many activities in my community/neighborhood are important to follow (keep abreast of).		
Strongly disagree	2%	3%
Disagree	3%	3%
Neither agree nor disagree	30%	30%
Agree	56%	54%
Strongly agree	9%	11%
I think young people here have a good understanding of the important issues that occur in the environment/community or school.*		
Strongly disagree		3%
Disagree		11%
Neither agree nor disagree	30%	19%
Agree	59%	64%
Strongly agree	11%	3%
There are opportunities for youth like me to express opinions about neighborhood or school life.		
Yes	97%	100%
No	3%	
There are many opportunities for young people like me to be actively involved in the neighborhood or school.		

Strongly disagree	3%	
Disagree		
Neither agree nor disagree	9%	11%
Agree	72%	70%
Strongly agree	16%	19%
I think young people here have the ability to be actively involved in activities in the neighborhood or school and make decisions.		
Strongly disagree	2%	
Disagree	2%	
Neither agree nor disagree	25%	19%
Agree	60%	76%
Strongly agree	11%	5%
Most of the community leaders here or teachers and principals are willing to listen to me.		
Strongly disagree	2%	
Disagree	6%	8%
Neither agree nor disagree	51%	49%
Agree	34%	43%
Strongly agree	7%	

4.7 Perceived Community Engagement

The majority of alumni perceived community engagement to be important. Most believed that they could make a difference in their community if they tried hard, as well as that youth had the power to make a positive impact in their community or in their school (Table 4.7). Fewer believed that school personnel or respected adults in the community heard and respected youth opinions.

There were no statistical differences in these responses by school attended. In a couple cases, there were gender or age differences, whereby girls and older alumni tended to give a neutral response more frequently (data not shown).

Table 4.7 – Perceptions of Community Engagement among Alumni, by School (%)

	Bone Bone (n=64)	Walenrang (n=37)
I think it is important to actively be involved in my community.		
Strongly disagree	5%	5%
Disagree	5%	3%
Neither agree nor disagree	14%	
Agree	56%	73%
Strongly agree	20%	19%
If you try hard, you can make a difference in your community.		
Strongly disagree	5%	11%
Disagree	2%	
Neither agree nor disagree	11%	5%
Agree	55%	68%
Strongly agree	27%	16%
In my community, youth have the power to make a positive impact.		
Strongly disagree	6%	3%
Disagree	2%	5%
Neither agree nor disagree	27%	14%
Agree	46%	56%
Strongly agree	19%	22%
In my community, youth opinions are heard and respected by adults.		
Strongly disagree	6%	3%

Disagree	3%	11%
Neither agree nor disagree	38%	32%
Agree	42%	54%
Strongly agree	11%	
In my school, youth have the power to make a positive impact.		
Strongly disagree	5%	5%
Disagree	5%	3%
Neither agree nor disagree	20%	19%
Agree	62%	62%
Strongly agree	8%	11%
In my school, youth opinions are heard and respected by teachers and administrators.		
Strongly disagree	6%	8%
Disagree	2%	8%
Neither agree nor disagree	33%	30%
Agree	42%	46%
Strongly agree	17%	8%

4.8 Actual Community Engagement

Regardless of school, the majority of respondents indicated that local government officials had not sought their opinions or ideas in the prior year. However, when government officials had asked for youth input, the preponderance of alumni thought that he officials had put youth ideas into practice. These data trends did not differ statistically based on respondent gender or age (Table 4.8).

Table 4.8 – Actual Community Engagement among Alumni, by School (%)		
	Bone Bone (n=64)	**Walenrang (n=37)**
In the last year, has the village or sub-district government asked for your opinions and ideas?		
Yes	41%	30%
No	59%	70%
The last time the local government asked for your opinions and ideas, do you feel your ideas were then put into practice?		
Yes	91%	87%
No	8%	11%
Don't Know	2%	3%

5.0 Perceptions on Evidence-based Science, Innovation, Climate Change, and PT Mars

5.1 Evidence-based Science

Multiple examples were presented on what evidence-based science entails. When asked to associate words with "science and technology," respondents offered a range of interesting responses, including: tools, modernization, blood, electricity, computer, telephone, engine, social media, living organisms, robots, sophisticated equipment. Despite some rather odd responses, most members in all communities recognized the importance of science and they all agreed that one should know both the theory and the practical applied knowledge of a subject. An example of applied mathematics was knowing how to determine the density of planting cocoa trees; and examples of applied biology were related to top and side grafting of cocoa trees and testing pH levels in soil (low levels result in dwarf trees). Another story reveals local utilization of science when farmer-led research in Bone Bone led to the development of the M45 cocoa seed (clone). This breakthrough led to Mars visiting the farmer and the government eventually granting certification. One Tomoni resident however offered a negative take on science when explaining

the case of a cocoa farmer given the latest pesticide, but instead of controlling pests, resulted in the death of the cocoa trees.

5.2 Innovation and Technology

Various perspectives related to innovation and technology were displayed, with more respondents agreeing that cocoa farming was semi-modern in scope—between traditional and modern practices. This is exemplified by the adoption of pruning and top/side grafting; and the movement from using spades and hoes to manually remove weeds to now using herbicides (yet farmers still use older spraying machines because the new ones are costly and considered to spray too much liquid). Respondents claimed that farmers are willing to follow modern practices when proven to be effective and efficient, though costs of new equipment or other capital costs were the most often mentioned obstacles preventing farmers from acquiring the means to adopt more modern methods. A model farmer in Bone Bone revealed a discrepancy between knowledge and practice when suggesting that farmers know modern practices, but neither have interest nor willingness to adopt these practices. His given reasons related to the comments of other respondents and were related to the cost prohibitive capital needed and the local trend for slow adoption in general of new technologies among farmers. Yet a female community stakeholder in Bone Bone stated, "Farming cocoa should be more modern. Old ways are no longer considered efficient, because the farm is determined by its demography, its type of soil, its drainage…"

When it came to the conveyance of a new technique or technology, respondents were asked who they trusted more—a 20-year-old youth or 50-year-old adult. Responses could be categorized into three main areas. About half suggested the message would be better accepted if coming from the older adult, due to respect given to elders and the experience this person would bring. The other half felt that the youth would bring a modern perspective, i.e. new technology and knowledge to the table, and despite their lack of experience and young age, could be trusted. A Tomoni community stakeholder said, "Vocational high school students have shown good improvement in their knowledge and education as they do some practices in their school. When I was a college student coming to the school for field study I saw it before my very eyes that they are improving and possessing necessary experience now. So, if I was to choose, I would choose the young man." However, a small minority felt that what was more important was the content of the message and how it is delivered.

5.3 Climate Effects

Respondents across all groups agreed that climate change and disruption to the environment were occurring, though most lacked the scientific language to describe the concept in more technical terminology. The most common issues mentioned related to lack of predictability in rain patterns, unusual changes in normal temperatures, environmental degradation due to deforestation, increases in pests and other diseases that influence crops. Only two man-made causes were mentioned—illegal logging and excessive use of pesticides that damage mountainous ground from holding water, resulting in flooding and soil erosion. Tomoni and Bone Bone residents noted that the rain is completely unpredictable now, yet long ago it was predictable to come every six months.

5.4 Perceptions of PT Mars

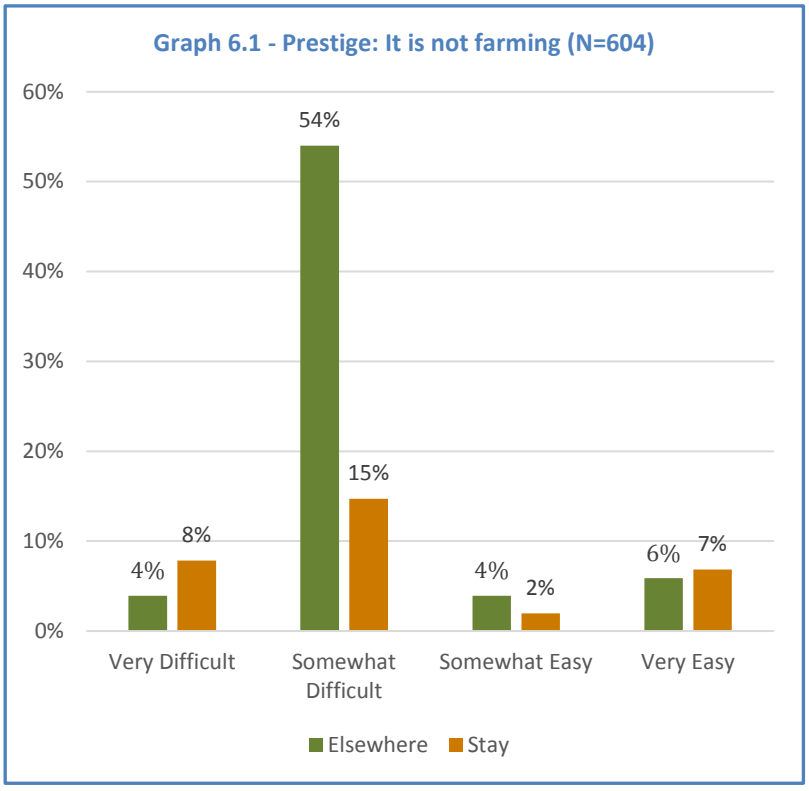
PT Mars was specifically mentioned by several focus group participants and key informants. **Overall, Mars has a positive perception in the community, with one Tomoni community stakeholder stating Mars' local hires are 60 percent and the rest are hired as laborers in**

processing plants—only one local resident is a permanent employee with Mars. According to Tomoni parents, Mars hires more workers from SMKs versus SMAs. Mars was also recognized for its community outreach program to local farmers, where participants learn to treat tree wounds and apply the appropriate fertilizers. Though one Tomoni community stakeholder took issue with Mars. He explained that a Mars official instructed farmers that urea fertilizer was no longer needed in certain conditions, but the results damaged trees. He claims urea is like the "breath for the tree" and farmers have resorted to using urea again, albeit in secrecy.

6.0 Drivers of Youth Involvement in the Cocoa Sector

The perceptions of the future of cocoa farming are mixed across all three communities, with seven main drivers derived from respondents' comments and survey data. Of these drivers, five are more negative in tone and two are positive.

6.1 Prestige: It is not in farming

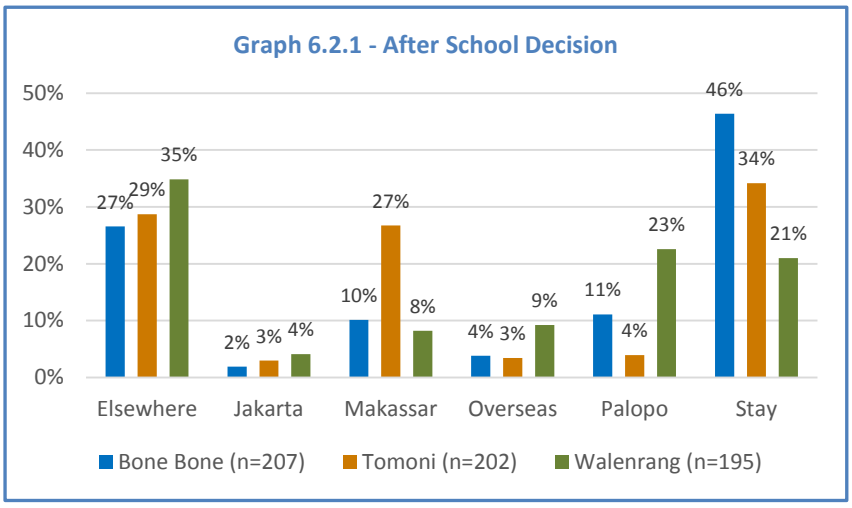


First is the issue of prestige and associated success found in non-farming careers (Graph 6.1). **Farming is simply not viewed as prestigious. It is associated with hot, dirty, exhausting manual labor under the sun and conducted mostly by an older generation (40 to 60 years of age).** Cocoa farming competes with the perceived image of wearing a "uniform"—the term used by respondents to describe shopkeepers, supermarket workers, or anyone working in an office setting. Related is the idea that farming is correlated with being uneducated. "In my opinion. parents think that they can become farmers without education, without studying at university, without this one, they can do farming. It is different from the employees, they must have a certain diploma, then they can be there. But, for farmers, without it, they can" Tomoni SMK teacher. In summary, the desire for prestige and higher education become powerful magnets, drawing youth away from cocoa farming.

From the alumni perspective, most felt that farming was at least somewhat difficult, regardless of gender or school. Those that left the village after school, however, were far more likely to believe that farming was difficult or very difficult as compared to those who decided to stay after graduation:

6.2 Youth Migration

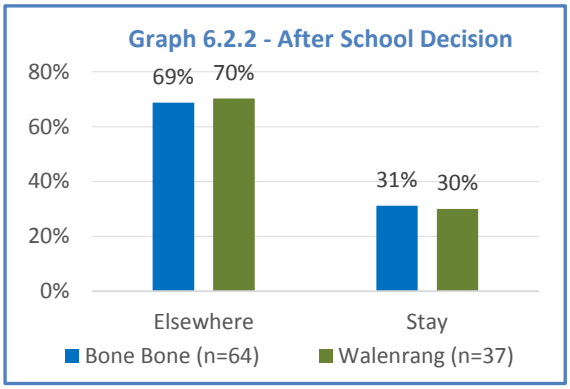
The second driver comprises trends of youth migration out of these rural communities. **Statistically significant survey data show that students from Bone Bone and Tomoni are more likely to stay in the village after graduation, while Walenrang students are more likely to leave for Jakarta, Makassar, Palopo, or elsewhere.** The allure of larger metropolitan areas, for either work or study, possibly attracts a sizeable portion of these Walenrang youth.

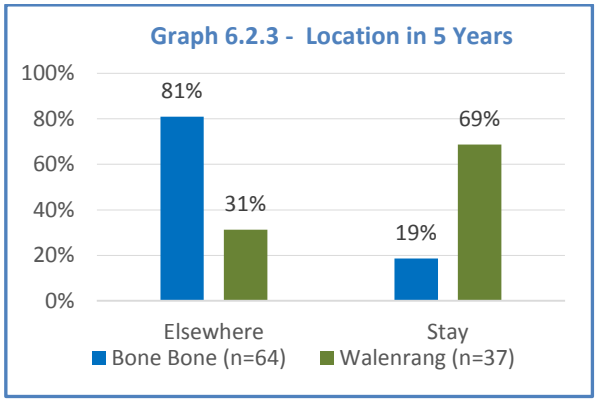


Graph 6.2.1 shows by percent, by SMK, where students plan to go after graduation.

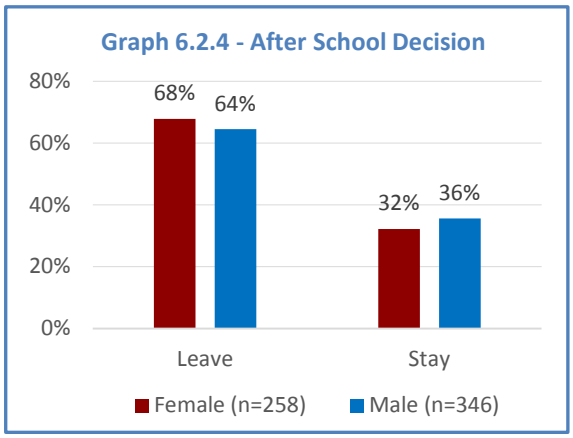
Of the 101 alumni surveyed in Bone Bone and Walenrang, 32 decided to remain in their village after graduating. This number did not appear to depend on basic demographics (gender/school).

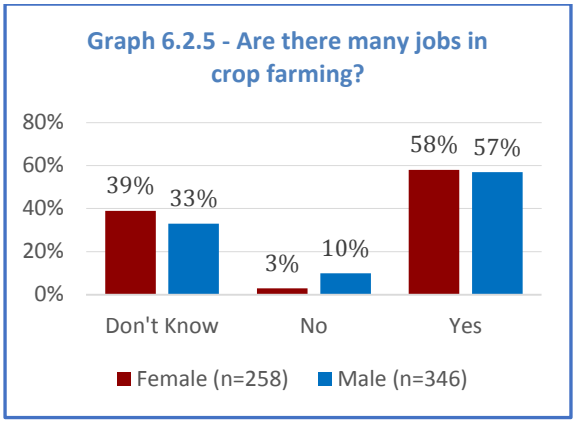
Moreover, most alumni intended to leave the area after graduation, and stay away for at least five years and a large proportion of those remaining after graduation do intend to go elsewhere within at least five years, as shown in Graphs 6.2.2 and 6.2.3.

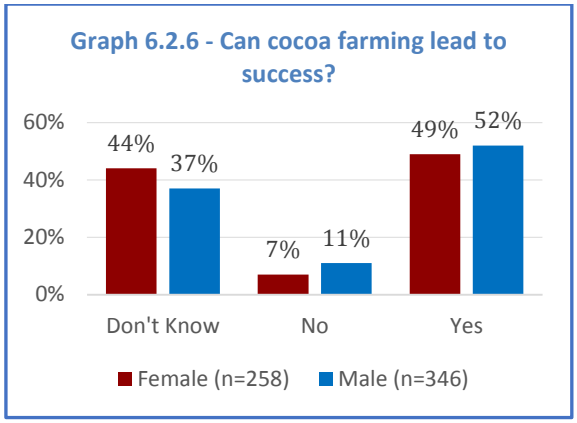


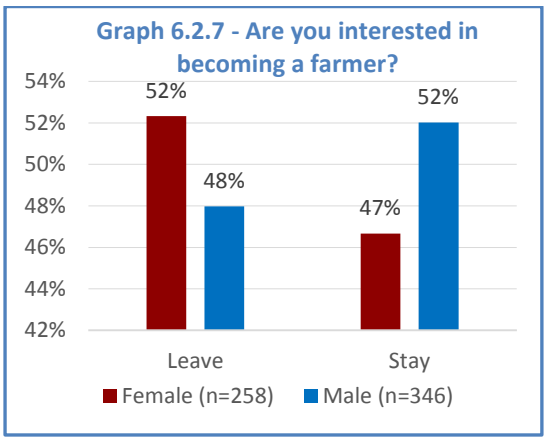


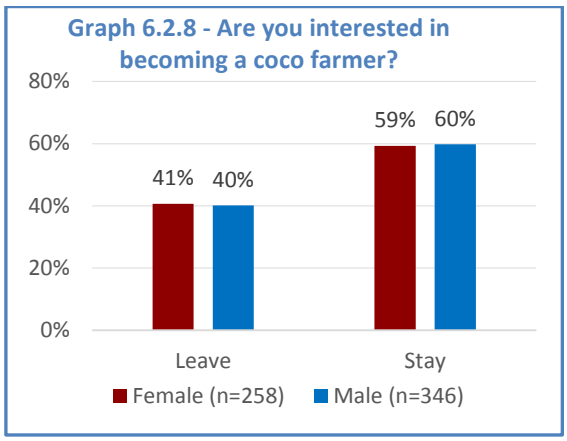
Viewing migration through a gender lens did not prove to have a strong relationship with many of the variables considered important in this study. For example, Graph 6.2.4 shows the decision of the students to stay or leave the village after graduation, with little difference when divided by gender. Similarly, the students' opinions on farming and cocoa farming are not very different according to gender as demonstrated in the following four graphs.



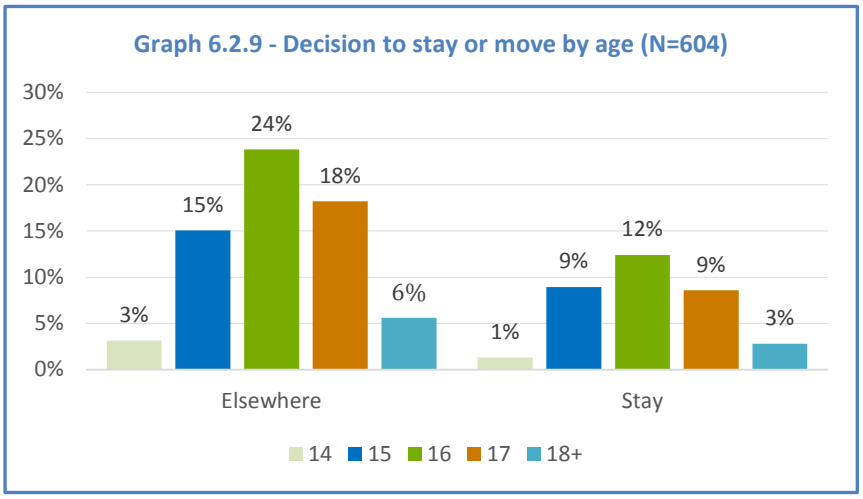








Thus, gender cannot immediately explain the most important questions this survey was examining.



A similar conclusion can be drawn about age. Results based on age for deciding to stay or leave are more less a reflection of the age demographics of students surveyed (Graph 6.2.9).

It may be understandable that recent graduates want to experience life beyond their home community. **However, many parents who are farmers wish to see their children pursue careers outside of farming, and for some, out the local area**. One community member stated, "Booo….after studying at college, why are you coming back to the farm? It is a failure!" Such sentiments illustrate the perceived failure on behalf of parents, and even the community to a certain degree, if a child returns to farming or rural communities. There are however parents, who just want their children to have a better life and this is perceived to be a reality beyond cocoa farming. In short, the bright lights and big city, and accompanying cosmopolitanism, larger social

life, and sense of modernity trump have the potential to trump the traditional life in rural environments.

6.3 Competing Career Options

Third, cocoa farming faces competition not only from "uniform" wearing jobs, but also the mining industry and the allure of the high seas. The nickel and core mines in Morowali (in the southern regions of Central Sulawesi) offer attractive solutions for Sulawesi youth who do not want to leave the island. A second career is seafaring, via attending seamanship school in Makassar or elsewhere. A lucrative career in the maritime industry was also a common response to why youth do not return to these communities. Here, youth attend seamanship school in Makassar or elsewhere and then pursue a career in the ever-expanding maritime industry, where opportunities for higher pay and exploring the world are readily available.

6.4 Viability of Full-time Farming is Absent

A fourth driver relates to the perception that cocoa farming is not currently considered a viable full-time future career. In the past, when the price of cocoa was considered high, there was a local expression that "small fish is for employees [i.e. "uniform" workers] and big fish is for cocoa farmers." When the prices of other commodities (cloves, palm oil, corn, rice, peppers, durian fruit, etc.) becomes more attractive, cocoa farmers cut down their trees and plant more profitable crops. But as alumni from Tomoni point out, the cycle is always moving—when palm oil prices fall, farmers cut down oil producing palm trees and plant short-term crops like rice or corn—with some even going back to cocoa farming. Other community members suggested that cocoa farming is considered a side career, with local residents maintaining a small cocoa farm as an additional source of income. Another perception relates to the idea that one needs to own a large amount of land to efficiently produce enough cocoa. Price instability is similarly viewed as a hindrance. If prices could be stabilized or guaranteed by PT Mars or the government, the risk-averse would be inclined to produce cocoa.

A different way to examine the viability driver is to look at what the students consider to be barriers to entry into the field of farming, as opposed to what factors they believe will lead to success (addressed in Section 7.6). Table 6.4 highlights the perceived barriers. However, note that the table is not broken down by school, age or gender. This is because there were no statistically significant differences between the categories by these factors (Table 6.4).

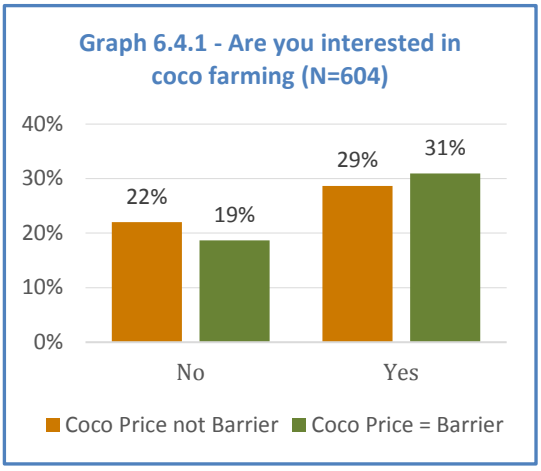
Table 6.4 - Perceived Barriers to Cocoa Farming

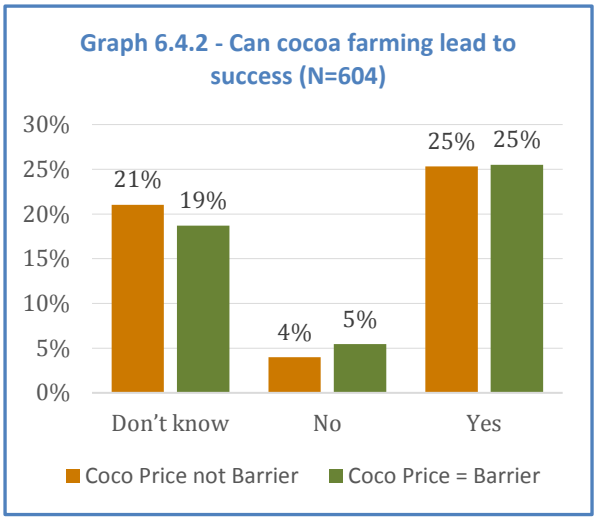
Possible Issues	Percentage Response[27]
Cocoa Prices	50%
Land Issues	58%
Financial Issues	43%
Not Enough Knowledge	43%
No Interest	33%
No Jobs	15%
No Prosperity	13%
No obstacles	10%

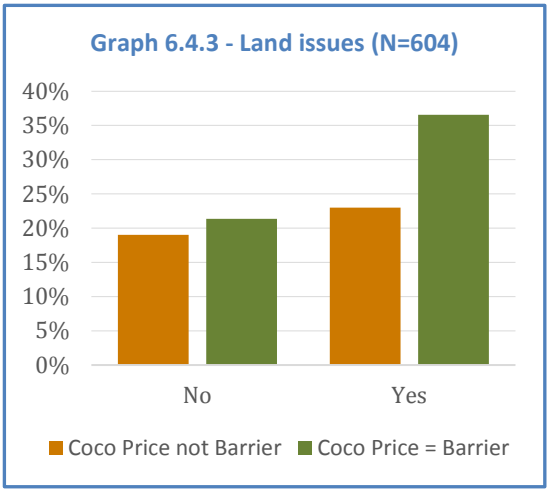
Important barriers identified to entering farming include cocoa prices, land and financial issues. Though it is noteworthy that many also believe they did not have enough information. This may tie in with the results listed above. In addition, while cocoa prices are listed as a common barrier

[27] Respondents could choose multiple responses.

to entry into farming, citing this barrier was not correlated with a student's interest in farming, nor their belief that farming can lead to success. In essence, the cocoa prices themselves were not a significant factor in students' decisions regarding cocoa farming. This is demonstrated in the Graphs 6.4.1 and 6.4.2).[28]

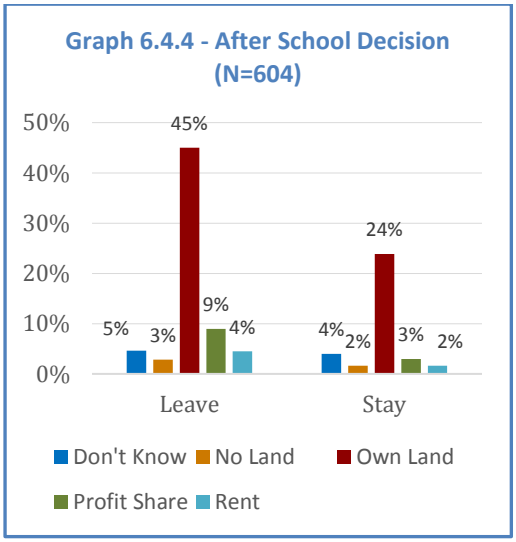


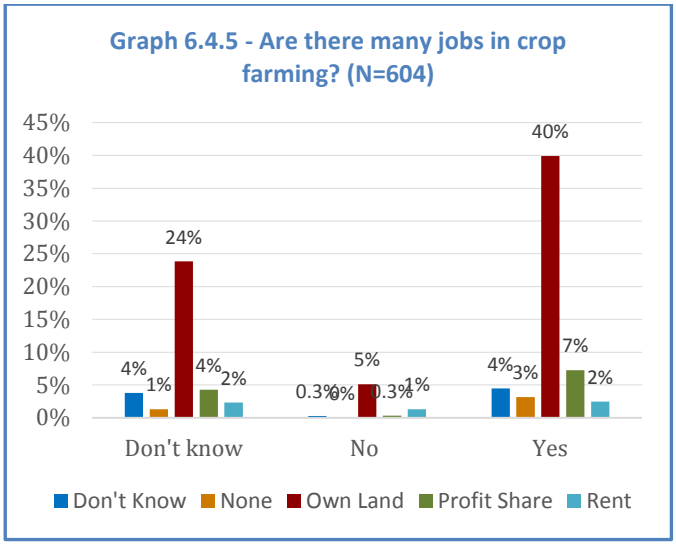




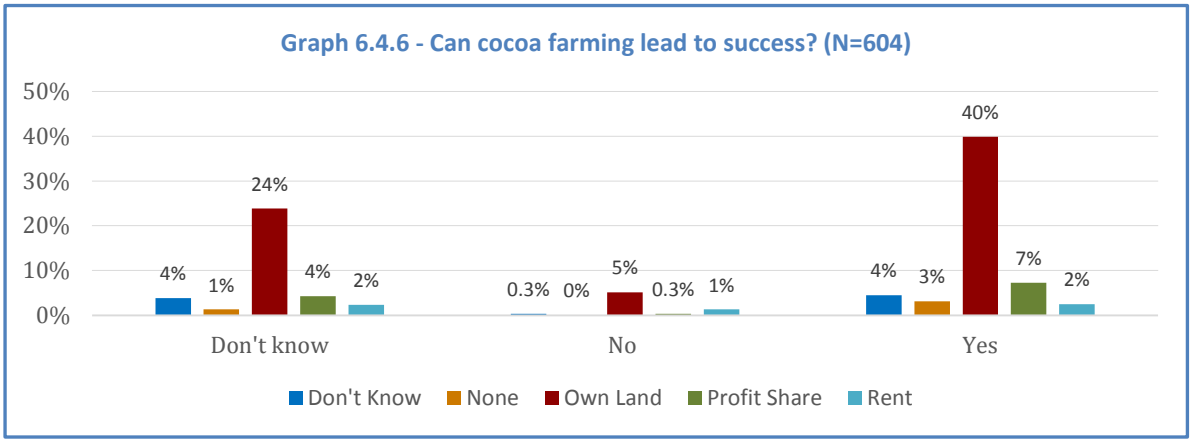
Only one barrier seemed to have a relationship with the likelihood to farm—land issues. Those who felt land issues were a barrier were slightly more likely to be interested in cocoa farming, as is seen in Graph 6.4.3.

Land ownership had no significant impact on 1) whether students intend to stay in the village after graduation; 2) whether they believe there are jobs in farming; and 3) whether cocoa farming can lead to success (Graphs 6.4.4, 6.4.5, and 6.4.6, respectively).

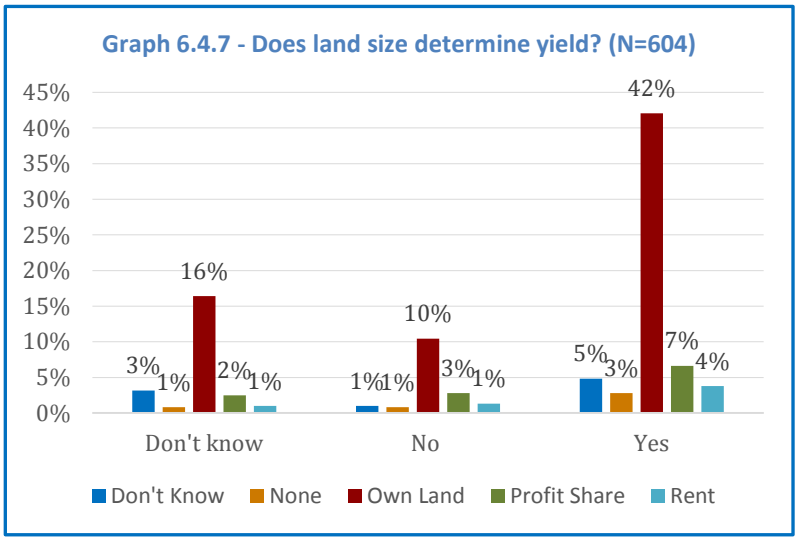




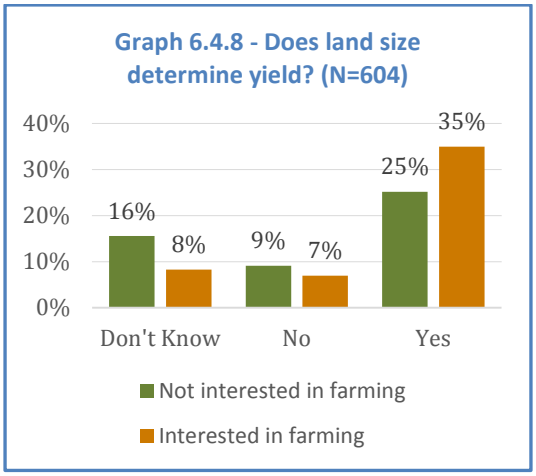
[28] None of the relationships are statistically significant.

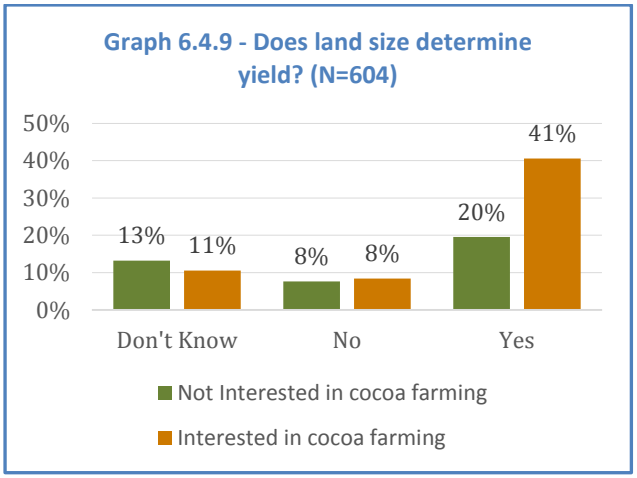


However, while land ownership was not relevant, the respondents' beliefs about land size were important (Graph 6.4.7). Most respondents believed land size was important for determining the yield of the farmer, regardless of whether they were a landowner or not ("Yes" is the largest frequency in each land ownership category):

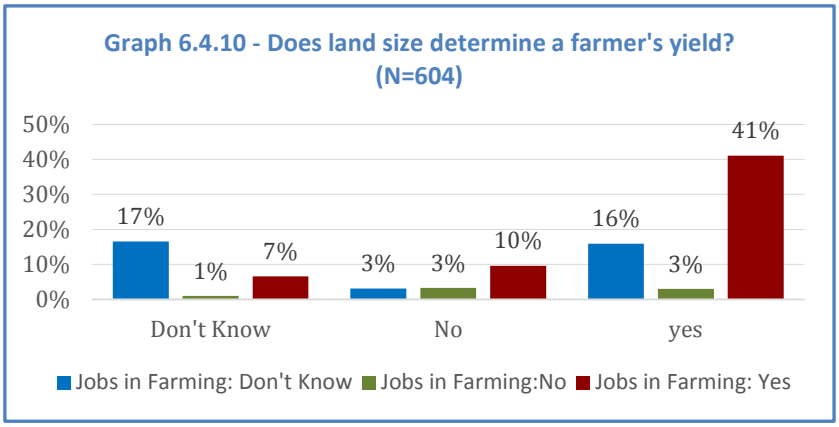


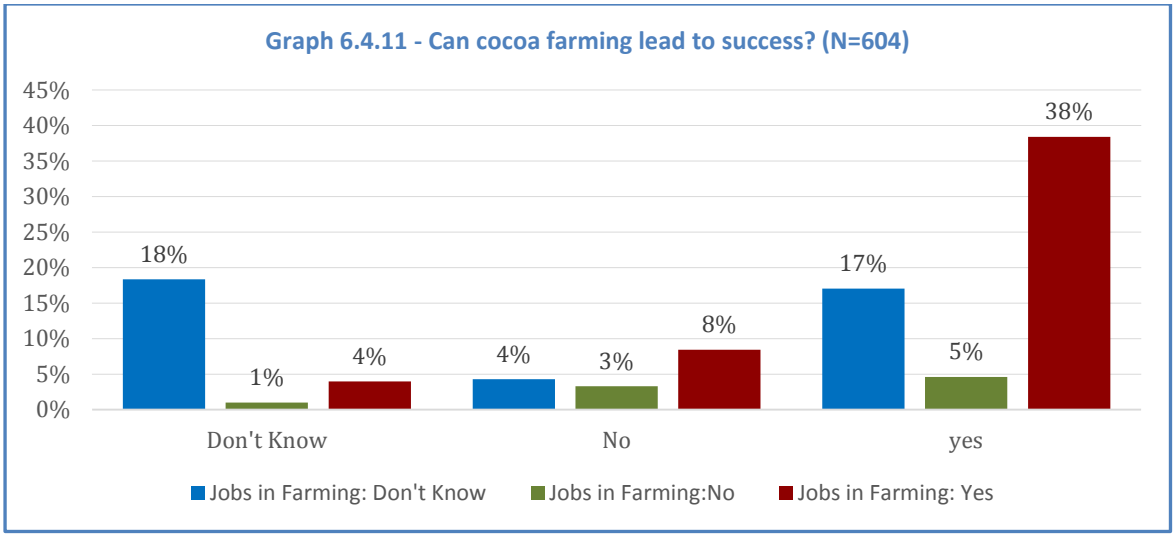
Moreover, this belief about yield and land size was correlated with a larger interest in both farming and cocoa farming (Graphs 6.4.8 and 6.4.9).





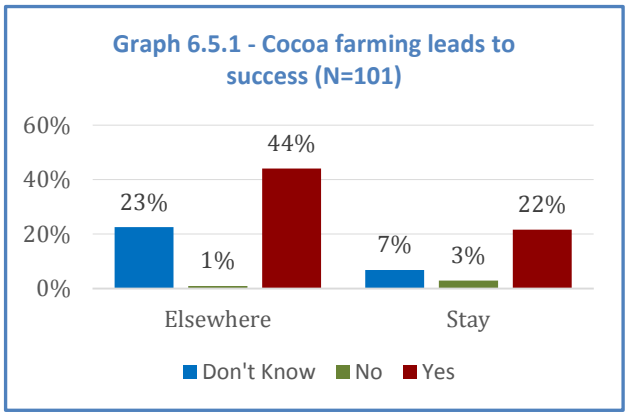
In addition, those that believed that land size contributed to yield were also much more likely to believe that there were many jobs available in the farming industry and that cocoa farming could lead to a successful life (Graphs 6.4.10 and 6.4.11).





6.5 Lack of Interest in Farming

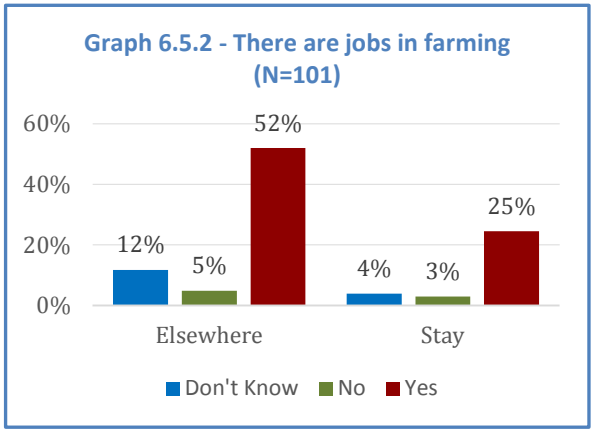
A general lack of interest, not just in cocoa farming but other crops as well, drive youth to avoid careers in agriculture. Several contributing factors could be at play. According to one Bone Bone cocoa farming parent said, "Cocoa is picky in terms of the place they can grow. Some cocoa is best for high land and some other is best for lower land. Cocoa is susceptible to excessive and stagnant water. That is why many cocoa farmers from the lowlands do not care about their farms anymore or even convert their farm to other crops like palm oil." This lack of interest could be closely tied to the prestige factor or a negative outlook toward the future of farming in general, as is evident in the sixth driver discussed next.

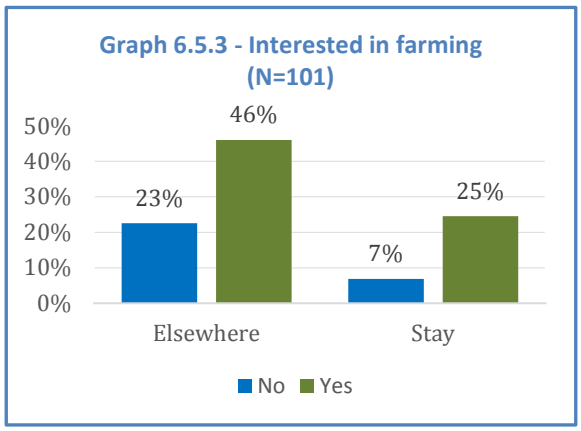


A closer look at alumni survey data showed little relationship between farming and the decision to leave after graduation. The decision to leave was not correlated with any of the following:

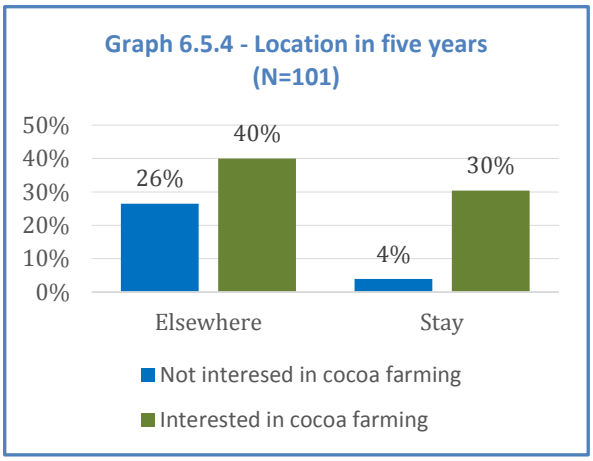
- *The belief that cocoa farming leads to success (Graph 6.5.1)*
- *The belief that there are jobs in farming (Graph 6.5.2)*

- Interest in farming (Graph 6.5.3)





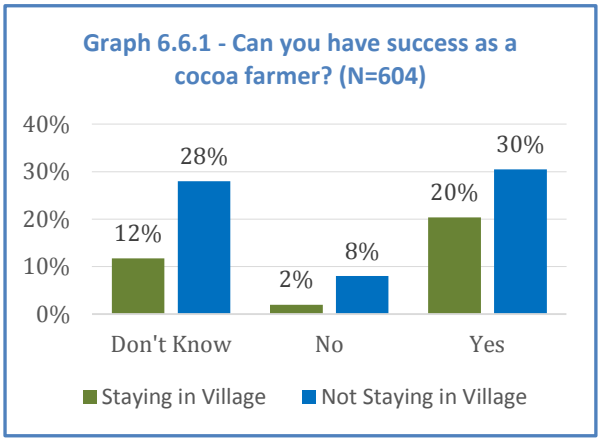
Another important consideration was where the alumni intended to be in five years, as opposed to where they went immediately after school. **Not only did most alumni want to leave within five years, but a disproportionate number of those leaving were not interested in cocoa farming**. That is, a disinterest in cocoa farming was correlated with a desire to leave the village within five years (Graph 6.5.4).



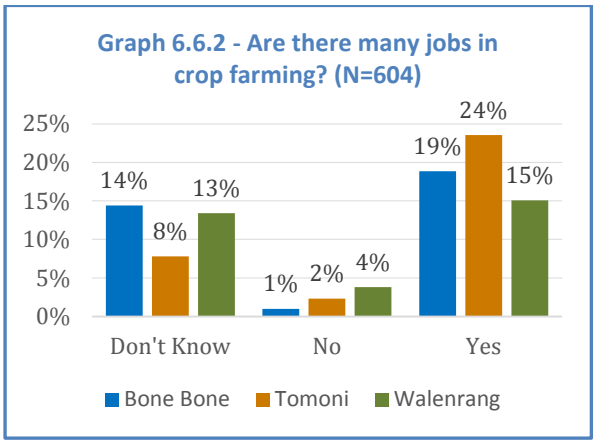
Only one barrier to entering the industry had a significant relationship with a alumni's decision to leave or stay. Those that intended to stay in the area were much more likely to believe land issues were a barrier to entry into the industry. Earlier graphs showed that those staying in the area after school were more interested in farming, but Graph 6.5.5 shows that those that are interested in cocoa farming tend to also believe land issues are a barrier to entry. Thus, addressing the land issues could entice those that are staying to enter into the farming industry.

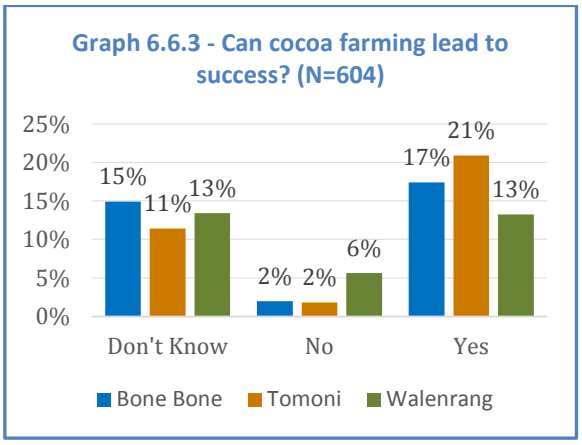
6.6 Youth Staying Believe in the Future of Cocoa Farming

Students that are deciding to stay in the village are likely driven by the belief they can have success as a cocoa farmer as compared to those that wish to leave. Though a significant portion of students do not know if there is success in cocoa farming and a more than half of these do not plan to stay in the village, as is shown in Graph 6.6.1.

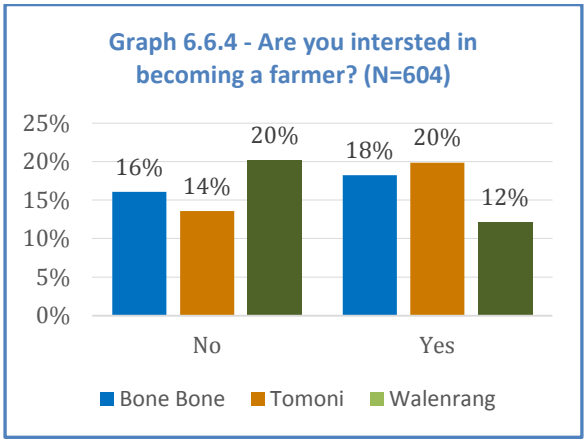


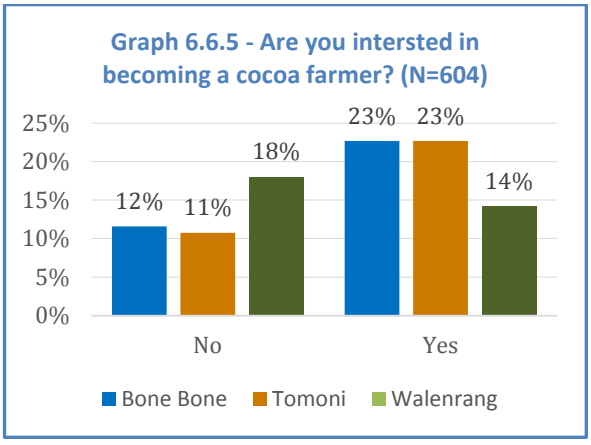
The following two graphs (6.6.2 and 6.6.3) break this down by school, showing that students from Walenrang are less likely than then student from Bone Bone and Tomoni to believe there are many jobs in crop farming or that cocoa farming can lead to success.





When asked if they were interested in becoming farmers (generally) and cocoa farmers (specifically), more students from Bone Bone and Tomoni wanted to do so. Students from Walenrang were less inclined.





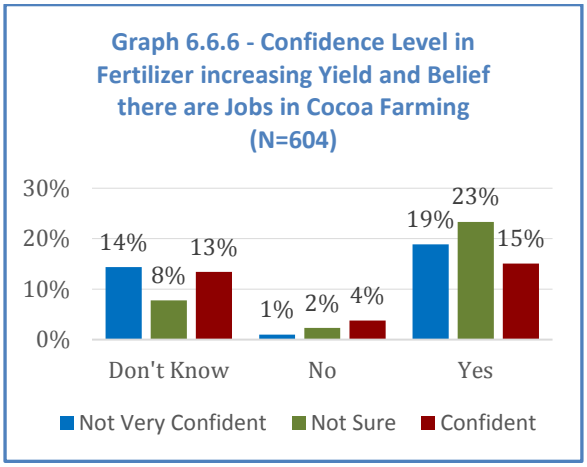
Thus, part of the answer for why the Walenrang students have a larger likelihood to leave may be related to their hope in the future of the farming industry. However, the "future hope in farming" could be driven by many factors. One way to understand this is to look at which factors the students believe will lead to successful farming. For example, respondents were asked which actions they could take to lead them to successful farming (multiple answers could be selected). Percentage responses are listed in Table 6.6.1.

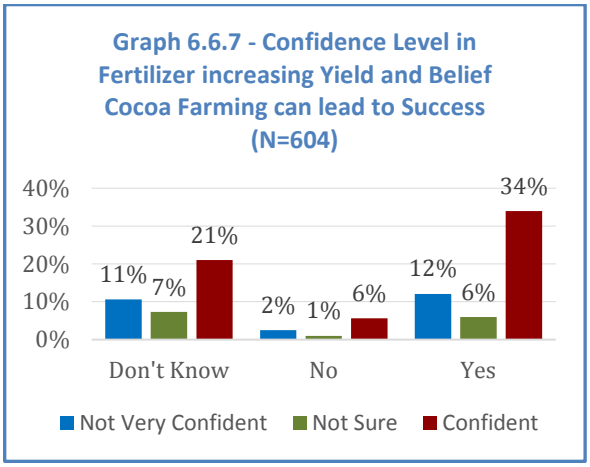
Table 6.6.1 - Actions that can Lead to Successful Farming (%)

	Bone Bone (n=207)	Tomoni (n=202)	Walenrang (n=195)
Ask Many Questions	44%	55%	35%
Pray	62%	69%	70%
Use Fertilizer	44%	45%	42%
Use Innovative Techniques	68%	66%	42%
Seek Input	46%	58%	27%
Follow Weather	37%	48%	31%
Maintain Relationships	61%	63%	47%
Get Education	24%	29%	19%

A key result is that students from Walenrang were significantly less likely to "Use Innovative Techniques" or "Seek Input from Experts", or "follow weather patterns/forecasts." In essence, students from Bone Bone and Tomoni were more likely to use actions based on science to help make farming decisions, while Walenrang students appeared more likely to depend on other methods alone. If Walenrang students are less aware of possible scientific solutions to farming problems, they may be less likely to want to pursue the industry.

An example of this is "fertilizer yield," and whether students are confident that its use can improve yield. The graphs (6.6.6 and 6.6.7) below show that those that do not believe there are many jobs in farming are much more likely to be unsure about the effectiveness of fertilizer yield. **Thus, there appears to be a link between the knowledge of students about farming, and their opinions about the industry.**





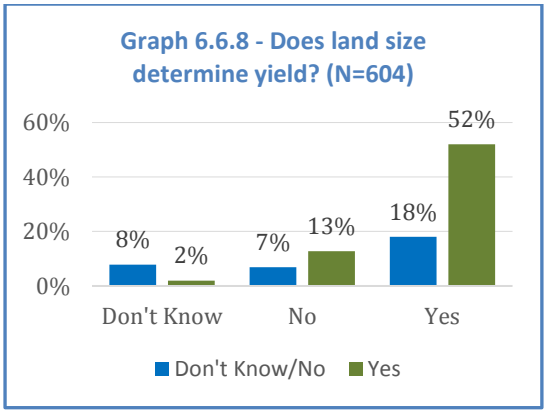
Like the students, the alumni pointed to cocoa prices, land issues, financial issues, and a lack of knowledge as barriers to entering the farming industry (Table 6.6.2).

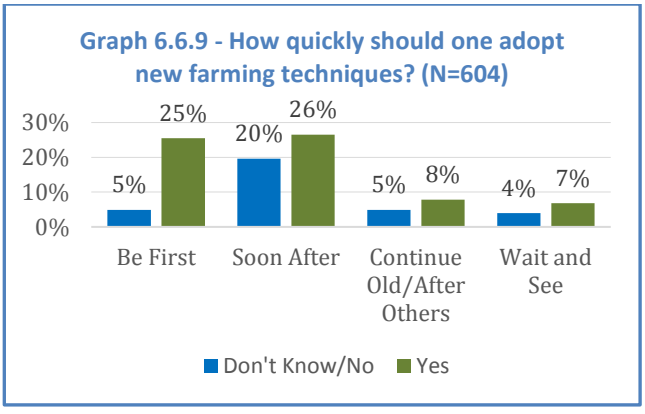
Table 6.6.2 - Alumni Possible Barriers to Cocoa Farming

Possible Issues	Percentage Response[29]
Cocoa Prices	48%
Land Issues	56%
Financial Issues	54%
Not Enough Knowledge	54%
No Interest	29%
No Jobs	15%
No Prosperity	16%
No obstacles	11%

However, there was not a strong relationship between the alumni's beliefs about success in cocoa farming and other important factors such as land size determining yield and their response to using new techniques in farming. In both cases (Graphs 6.6.8 and 6.6.9), the bivariate relationships were not statistically significant. It appears that attitudes towards land size and new farming techniques are not important drivers of attitudes towards cocoa farming.

[29] Respondents could choose multiple responses.



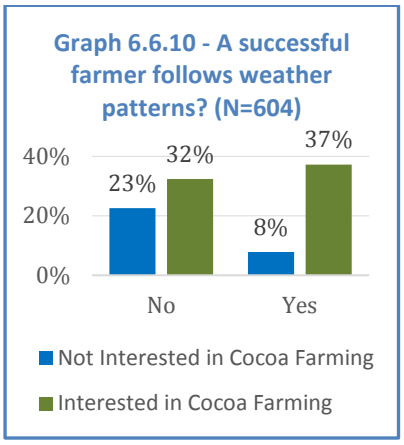


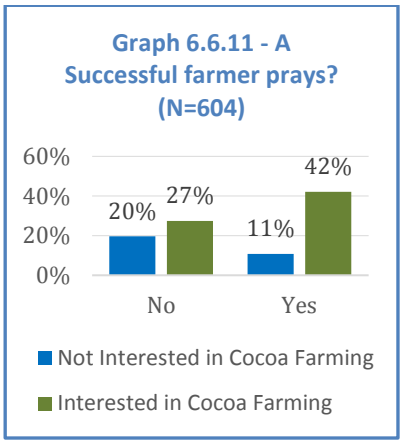
Instead, the alumni listed the following items as reasons that a farmer would be successful (Table 6.6.3). Similar to students' responses, there were discrepancies between responses that would suggest alumni value evidence-based approaches, i.e. a high response to using innovative techniques/asking many questions, but low response to actually using fertilizer. Beyond a purely scientific approach, alumni expressed cultural components like the importance of maintaining relationships and practicing prayers as being important for cocoa farming success.

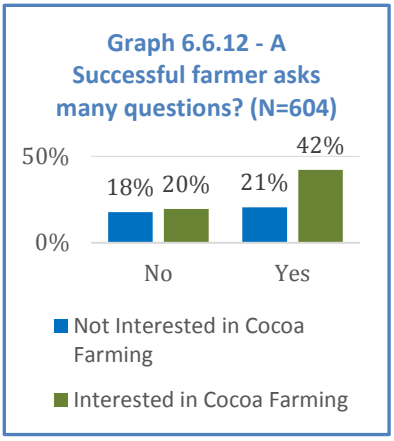
Furthermore, of these reasons, three were correlated with success in cocoa farming. Those that were interested in cocoa farming were more likely to be people that believed that weather patterns, prayer, and asking questions were important to successful farming (Graphs 6.6.10, 6.6.11, and 6.6.12) .

Table 6.6.3 Alumni Reasons for Cocoa Farming Success

A successful farmer should:	Percentage Response[30]
Ask Many Questions	63%
Pray	53%
Use Fertilizer	38%
Use Innovative Techniques	76%
Seek Input	53%
Follow Weather	45%
Maintain Relationships	68%
Get Education	33%







6.7 Small Minority See Cocoa Farming Positively

A minority of respondents expressed positive attitudes about the future of cocoa farming. An excellent example comes from a Tomoni farmer supporting his son's enthusiasm for growing cocoa. He recounted how he previously was producing rice, but now growing cocoa, mostly at the

[30] Respondents could choose multiple responses.

behest of his son, who knew that an SMK education offered a better future. The son secretly enrolled in a local SMK and focused on studying agriculture. His son's passion for growing cocoa was so evident that it propelled the farmer to also use what little savings he had to purchase additional land and plant it to cocoa so his son could learn practically how to raise cocoa. Another example of how exposure to the cocoa industry can change perceptions is captured in a female community stakeholder from Bone Bone. Prior to joining Swisscontact, she viewed cocoa farming as a difficult job, but her on-the-job experience demonstrated a wide variety of opportunities—from training farmers to working with PT Mars. Her insider perspective led her to say, "The relationship with the young generations, it seems that cocoa farming has to be introduced to them, not only to people who have learned about cocoa farming, but to other community too. It is because there are many job opportunities in cocoa fields. It should be shared especially to the young generation as well."

Other advantages of cocoa farming highlighted included: all ages and gender can work with cocoa, it is easy to harvest, money can be earned faster than palm oil, and there are numerous side businesses one can conduct, like selling seedings or running a nursery. The best conclusion to capture the positive nature of cocoa farming is found here: "The thing is if you want to be a farmer, there is nothing can stop you but your willingness and determination. The farming and agricultural tools and equipment are easily found. However, if we have no willingness and intention, then things are going to be difficult. If you choose to be a farmer, simply put; where there is a will, there is a way" (female Bone Bone cocoa farmer).

Additional insight about land use, yields, and capital utilization reveal mixed perspectives. According to Walenrang farmers, a cocoa farmer is more successful than a rice farmer, assuming they have the same amount of land. This is due to the increased cost associated with rice farm to purchase fertilizer and pesticide. Qualitative analysis suggests that respondents across all three communities thought about half of the cocoa farmers owned their own land, while the other half rented property. The minimum amount of land deemed necessary for a small family was a quarter hectare or about 300 trees. The average cocoa farmer was thought to cultivate between half to a full hectare. While many respondents agreed that more land dedicated to cocoa farming produced higher profits, the amount of land doesn't really matter. What is truly important is how well it is managed.

7.0 Perceptions & Trust of Parents, Teachers, Community Stakeholders of Youth in Cocoa Farming Communities in South Sulawesi.

7.1 Relationship Support

Parents play different roles in the lives of their children that either foster positive or negative relationships. Parents may be a source of advice, and self-sacrifice, as exemplified in terms of working harder to have their children go to school. Parents can also be disciplinarians. Children may learn as they get older to value the role of their parents more, retrospectively. A female alumna in Bone Bone recounts, "When I was still student, it seems that the parents' advice is the most annoying thing, even more if I don't agree with it." She continues with a new perspective since graduating, "Now I always think that my parent's advice is something I need it. On the other side, now my parents already understand me and they think that I can make my own decision and responsible for it. Now I don't get restricted anymore for example if I need to go out at night, not like when I was still a student."

Additionally, positive relationships with parents may mean more positive outcomes in school performance and behavior. Children shape different relationships with their parents too. Some children may be more open with their parents. This could be truer about girls who may feel more comfortable seeking advice, particularly from their mothers, whereas boys may seek advice from their peers, though there was not consensus among respondents that this was in fact true. There may be distance growing between parents and children, where parents are so busy working and sending their children off to school that they are playing less of an active guiding role, relying on their child's teachers to provide guidance. The physical separation from their parents because of work and school may cause a deterioration in the connection students have with their parents.

Vocational schools provide enrolled students with the space and time to build peer support groups. Youth who would be otherwise spread out geographically spend time together in concentrated groups where they build relationships based on play, studying, and shared experiences. Some students claim that the quantity and quality of friendships they make in school are better than they would be if they were not in school. Similarly, alumni state that mutual trust is higher among their peers in the SMKs than after. They also offer students some power to express their own values which might be different to those of their home community. For example, students may come together to help a friend avoid an arranged marriage. Students are also able to help one another out financially by borrowing from one another, and they provide each other with encouragement to try new endeavors.

The relationships students have in school foster loyalty, solidarity, encouragement, knowledge and trust, and typically cross both ethnic and religious lines. Examples given include visiting a friend in the hospital, treating a friend to a meal when they don't have money, helping each other complete homework. A male student in Bone Bone stated, "When I became the leader of the flag ceremony, he [my friend] convinced me that I could become the leader of the ceremony." In Indonesian schools, there are still many ceremonies with students standing neatly lined up in the school yard led by ceremonial student leaders. In Walenrang, this ceremonial leader was considered an "ideal" model student and encompassed considerable pressure to conduct the ceremony properly.

Some experiences may be negative however, because not all groups of students get along, leading to conflicts or ostracization due to alcohol and/or drug usage. Respondents thought schools often offer an alternative to being around "bad" youth who may use drugs and alcohol in their home communities, i.e. these school-based peer relationships could be an alternative to relationships where drugs and alcohol are used back in their home communities. The mention of drug and alcohol problems was common thread through multiple KIIs and FGDs, both youth and adult. This topic is addressed in more depth in Section 2.6.

7.2 Social Cohesion

Changing social values and a decrease in traditional socio-economic activities is perceived leading to fewer opportunities to bring people together and foster trust. For example, parents are less likely to accept other adults disciplining their children (a decrease in collective parenting), and newly adopted technologies have replaced the need for collaborative farm labor that fostered reciprocity. Intergenerational conflicts also threaten cohesion, especially where boys rebel against their parents. Unemployment does the same in a circuitous manor by leaving

youth idle with nothing to do, at which point they engage in socially disruptive behaviors like drug and alcohol use or resort to joining "gangs" and the inevitable conflict that arises.

Religious organizations continue to provide a venue for trust building, cooperation, and social cohesion, including across faiths. The same is true about schools, though the strongest cohesion there may be among students in the same school and studying the same major. Kinship, tribe, and religious ties also foster cohesion. There is also a culture of "gotong royong" (meaning "mutual cooperation" in Bahasa) which encourages togetherness. And even as farming practices change, the farming culture and practices help employ youth, including those with drug and alcohol problems, to find employment and community.

Sports, festivals, student associations, clubs, jobs, and craft and trade groups all help build and sustain cohesion in the communities that identify the challenges of individualism, unemployment/ idleness, and inequality threaten cohesion. Respondents claim that local government could do more to foster cohesion and address the forces that undermine it, yet the qualitative data suggest that the community is ultimately responsible for fostering and sustaining cohesion, and not the government or other entities.

Lastly, it seems recognized that cohesion is a deliberate effort requiring conscious actions to create the space and time for collective endeavors. Hindrances to this social cohesion include inequality, which is viewed as a dividing force in the effort to build unity; and the expectation of pay for work versus working for community may do the same.

7.3 Social Trust

Within families, mutual trust is developed—parents trust their children more as they get older and children tend to trust their parents and other adults in the community based on traditional respect for elders. However, some youth trust their peers more if they feel their parents are not supportive or fear parental discipline if sharing too much. Trust can be fostered or hindered based on the strength and type of relationship. Youth general trust their family and people from their villages more than those of other villages. Parents may trust their children more if their children are around the house more, possibly giving parents a better opportunity to judge their children's maturity based on regular observation of their behavior and ethics. There was now evidence suggesting greater distrust based on ethnicity, gender, or religious affiliation—generational differences being the primary determinant of trust. Additionally, local gangs are reported to build trust among their members by forming rules and maintaining them, creating strong bonds in the process, but ones that are equally distrustful of others, particularly other gangs.

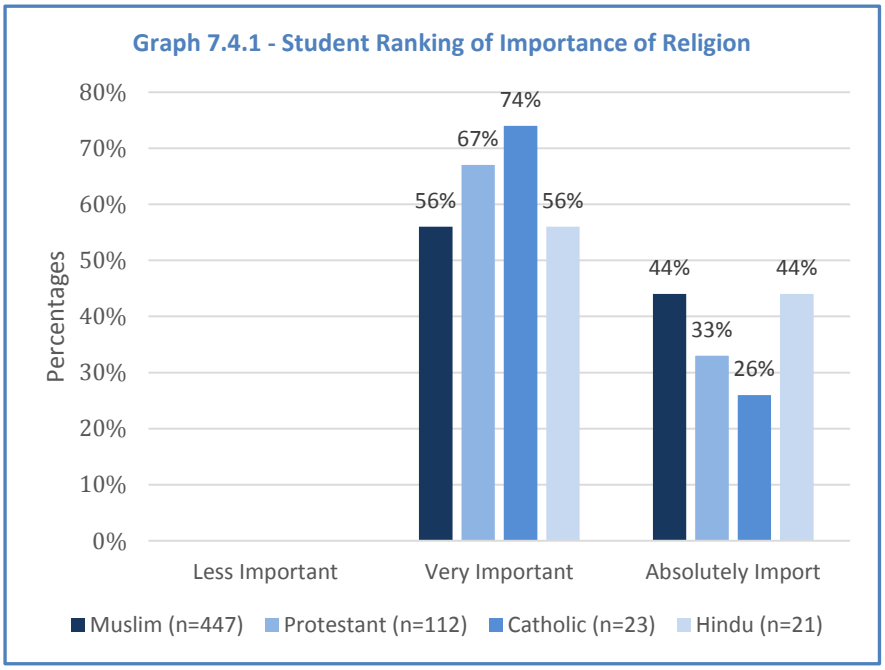
The views of one Bone Bone alumna captures this evolution of social trust: "When I was still at the beginning of college, my parents still didn't trust me, but during the time, with the maturity of my age and my way of thinking, made me more trustworthy, for example I was able to go out at night. I think, if we want to try, we need to prove to the parents. It's one of the factors to make people believe us to start a business."

A sub-component of social trust in these communities were narratives related to borrowing and lending money. The process of borrowing money or gaining financial capital represents a complex web of judgment, goodwill, relationship, and trust. Banks, cooperatives, and/or individuals were all mentioned as being primary sources of loans. Alternatively, money can be collected from palm oil collectors, local individuals, and/or pawn shops. People look for quick

transactions based on trust, especially if they are poor and do not have collateral, or the process for getting a loan is too complicated or time consuming. Borrowing from friends and family is viewed as being easier and more effective for some individuals.

7.4 Religious Values

Qualitative analysis across all communities demonstrate the importance of religion both privately and publicly. Religion plays a role in fostering community by providing a space and set times for people to come together and observe their faith. Islam, Christianity, and Hinduism are the largest religious communities were brotherhood, solidarity, and trust are built. Graph 7.4.1 shows the importance of religion to SMK students, with it being very or absolutely important for almost all students of every faith. Below is an excerpt revealing the importance of faith:



"Religion is the main thing. All the rules about what to do and what not to do are in religion. For example, children must go home before sunset after that, they have to bathe, eat, pray. That is an example of discipline. Children who are undisciplined then they do not have a good mentality" (male Tomoni community leader).

Interfaith activities occur, and people may share in the celebrations of other religious ceremonies, festivals, and holidays. These faith communities all support acts of compassion, peace, and generosity. Religion may play a role in helping some people stay away from negative influences like that of drugs and alcohol; and reinforces discipline and morality that help guide individuals' actions in the community. Conflicts between religious communities were alluded to in the past, but they are generally uncommon today.

Religious groups also set up organizations to foster healthy forms and faith and spirituality among youth beyond what they learn in the home. An example given by a Bone Bone student was ROHIS (Islamic Spiritual Organization), which builds a bond [brotherhood/ukhuwah] in Islam. However, as one Bone Bone father said, "…although religious values have been given at home, but students sometimes "slip" for their interaction outside the home. Therefore, in mingling children should be able to distinguish which is good which is bad. The bad ones of course the ones that makes parents to get angry."

7.5 Conflict Resolution within Communities

Conflicts mentioned among respondents range from youth brawls, students being expelled from school, to domestic issues and substance abuse. A Bone Bone community stakeholder mentioned

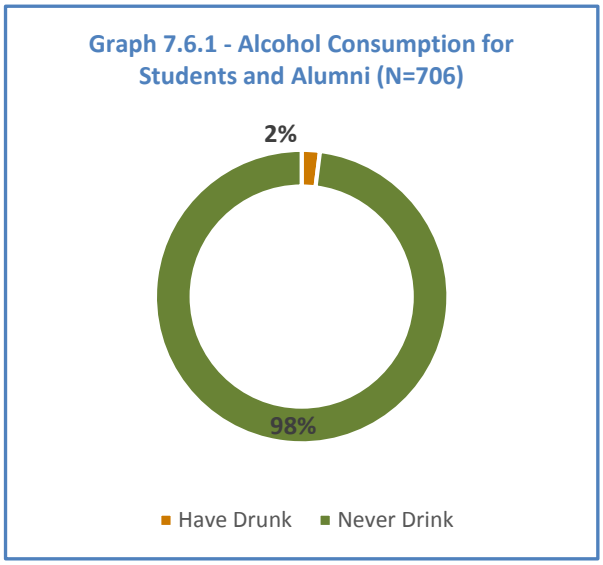
that strikes occur every five years, which she thought could be caused by political issues (five-year election cycles). Conflicts in school may occur along ethnic lines. Conflict resolution occurs based on the type and severity of the issue. Village leaders, school leaders, religious leaders, local government, and/or the police may be involved to resolve it. Overall though, major forms of conflict did not appear present. The most attention was drawn to substance abuse issues and gang activity, which is discussed next.

7.6 Social Capital Hindrances: Negative Views of Some Youth Habits and Activities

Substance abuse (alcohol, drugs, and smoking) and involvement with gangs were perceived by most focus group respondents and interviewees as problems facing youth in their communities. It is important to remember here that this is a community-wide perspective of youth, an age group generally captured between 18 and 35 years of age. Therefore, this may preclude their assessments of SMK students who may be considered a child or adolescent under the age of 18 (as shown in the student demographic data—16 years of age are the mode and 17-year-olds the median), but would include alumni age groups (18+).

7.6.1 Alcohol Abuse

Over 65 references were made to youth and alcohol from eight focus groups and 22 key informant interviews. These comments reveal that most students, alumni, parents, teachers, and community stakeholders all agree that alcohol abuse is a problem in all three communities. Yet 98% of both students and alumni reported they never drink alcohol (Graph 7.6.1).



Islam forbids the consumption of alcohol, so these self-reported habits may be skewed due to a perceived social and religious pressure to abstain from drinking alcohol. However, a couple of respondents mentioned that a few social groups (or gangs) were created around the consumption of alcohol and provided a safe space for marginalized youth. Some of these youths may rather not engage in drinking, but feel like it is the only way to make and maintain friends, as suggested by an alumna in Bone Bone who said, "If we want to make friends in the village, we have to drink alcohol together." A teacher concurred when quipping:

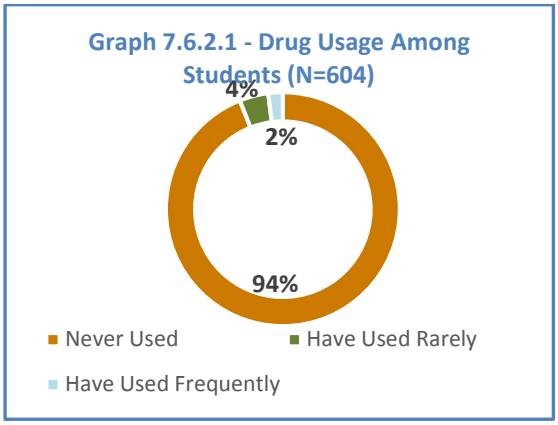
The current village head, a former thug, was a drinker and so on as a kid. Turns out he's smart. He is good at organizing naughty kids. For example like this [the village head will say], "If you want to drink, come to my house, it is safe." Later when the person comes and drinks there, he is given an explanation. He shares his experience. I see with this new village head, he has just been sitting as village head for a year, but he already got an award as the best village, the cleanest village. But if we compared with the time he was young, he was one of the naughtiest.

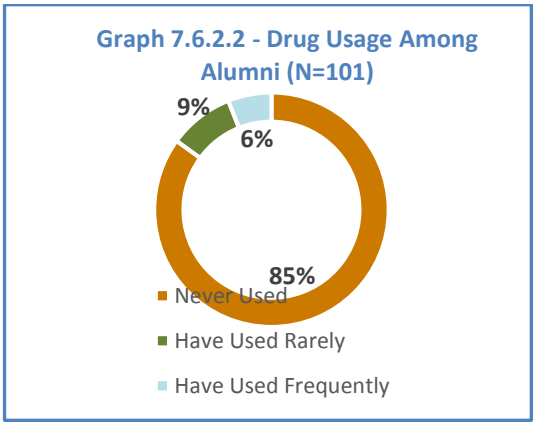
A Tomoni alumna also suggested that the most solid, socially cohesive, and trustworthy groups are those organized around drinking. A male alumna from Bone Bone said, "I do not really have any friends. If we want to make friends in the village, we have to drink alcohol

together. Many young people like to drink alcohol." Granted these examples represent a minority viewpoint, alcohol consumption may be condemned privately and publicly, drinking groups do provide a place for belonging for a few youth.

7.6.2 Drug Abuse

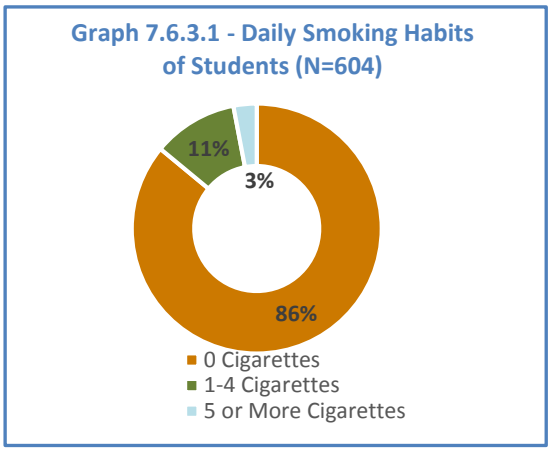
Illicit drug use was mentioned over 100 times from 15 focus groups and 19 interviews and deemed more prevalent among youth who are back in their communities, idle, and not at school. The most common forms of drugs referenced included marijuana (locally known as ganja), ecstasy, and crystal methamphetamine (known as sabu-sabu).[31] **Survey data show 94% of students and 85% of alumni report never doing drugs, and four percent of students and nine percent alumni stating they rarely do drugs, leaving two percent of students and six percent of alumni doing drugs more frequently (Graphs 7.6.2.1 and 7.6.2.2).** These figures do reveal a large increase of frequent drug use after leaving school, and may well represent the youth community members more widely referencing. On a more positive note, family, faith, and school were reported to help reduce drug use among youth, but respondents did not provide specific details.

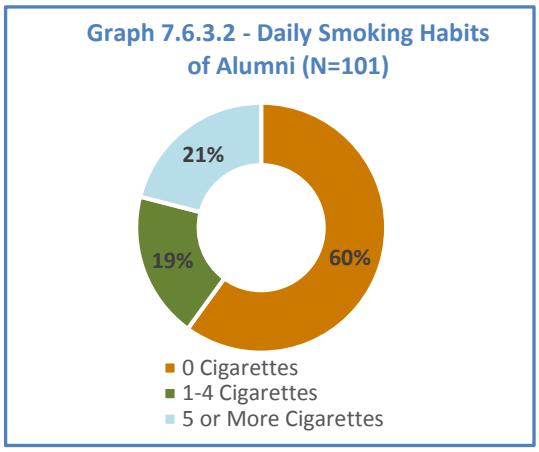




7.6.3 Smoking Habits

All three communities referenced smoking with negative connotations over 40 times (from six focus groups and seven interviews). Graphs below show 86% of students and 60% of alumni reported never smoking. Eleven percent of students and 19 percent of alumni stated they smoke





[31] Based on insight from the research team conducting the FGDs and KIIs.

one to four cigarettes per day, and three percent of students and 21 percent of alumni smoking more than five cigarettes per day. It is interesting to note that daily smoking habits of alumni nearly triples after graduating from SMKs.

7.6.4 Gang Problems

The problem of gangs was emphasized in five interviews and five focus groups (represented by all communities). These were characterized as motorcycle gangs generally and consisted of school dropouts and the unemployed, but maintain high levels of solidarity (similar to drinking groups). However, this solidarity, despite being positive, is abused, with one Bone Bone youth leader saying, "They should use their solidarity for doing such good things, rather than gathering until morning aimlessly."

As a Bone Bone teacher recounts:

> *Within the gangs they have rules. like a group member cannot make friend with member of other groups. Any violation to this rule will result the member to be excluded from the gang plus maybe with some violence. There are also secret codes and secret communications which are only understood by its gang members. I have experience related to this, I have a student who is a member of one of this gangs in the school, they use a special language to communicate to each other within the group. I don't understand the language at all. From the clothes they are wearing, we can tell from which group/gang they are. They may have certain rules to govern that in their group.*

8.0 Perceptions of the Education System in South Sulawesi

This section will provide in-depth insight on the existing teaching and learning process in the 2 vocational institutions, including on the STEM curriculum and local content; capacity of schools and teachers; profile of graduates; gaps and other influencing factors, as the basis for developing program for improvement of the SMK's education.

8.1 Community Perceptions on the Quality of SMK Education

Overall, there is a positive assessment of the three SMKs evaluated. Across all focus groups and interviews within the three communities, respondents were more or less positive in their evaluation of the quality of the SMK education, especially when they compared the SMKs to their local SMAs. A more thorough comparison is made in Section 10.2. Negative views of the SMKs are in the minority. A Bone Bone community stakeholder expressed his dissatisfaction when saying, "I think, the last three years the quality of SMK began to decline. Maybe people in SMK environment still say SMK is good, but I do not think so. Because recently there was a student who was rejected by Mars (during a field practice in Mars). That means it's no good anymore." Two teachers also mentioned there can be a tendency for negative competition to arise between the different majors within the SMK. Other education stakeholders emphasized the need for greater teacher training and better equipped science labs in the schools.

8.2 SMKs versus SMAs

A majority of the education stakeholders believe SMKs provide a solid education and prepare youth for immediate employment upon graduation, but do not necessarily preclude students from pursuing a university degree. Respondents were asked to compare SMKs with SMAs, with two important trends arising. First, most community members did not feel like SMAs were superior to SMKs, despite their reputation as being a better stepping-stone to a university degree. Second, the curriculum of SMKs (focus on both theory and practice) provided

an excellent foundation for the necessary skills to find a job after graduating. Numerous respondents highlighted how this practical application was an important component of SMKs and exposed students to hands-on experience and know how that could be directly utilized in several sectors (computers, automotive, agriculture, fishing, etc.) This was compared to SMAs and their sole focus on theory, which according to most respondents was only a preparatory foundation for pursuing a diploma or an undergraduate degree. Several excerpts demonstrate these sentiments:

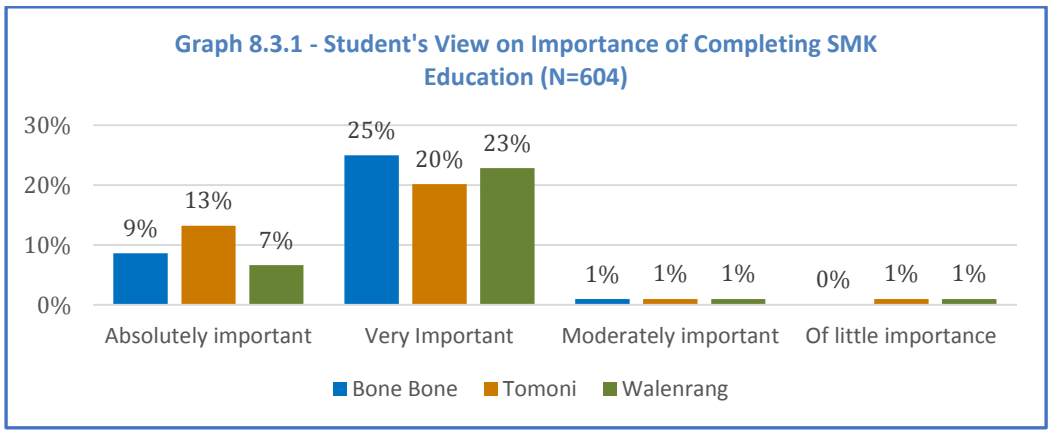
A Tomoni SMK alumna recounted, "I was actually about to enroll in SMA, but it was quite difficult to enroll in SMA. But suddenly there is an interesting offer from SMK Tomoni. My parents gave me the option to go there (SMK). I used to think that SMK student cannot go to college. My cousin said that currently SMK graduates can also participate in the test for state universities. So I went to SMK. It turns out that learning in SMK is cool. I am the first alumni of TKJ (Computer and Network Engineering) in SMK Tomoni." Likewise, a Walenrang educator stated, "…more parents think to put their children into SMK. The consideration is the economic level of the family. SMKs allow children to have technical skills so it can be easier to get a job, and if there are fortunes, they can continue to college." This captures well the sentiment of many respondents, i.e. the flexibility that SMKs afford students—either immediate work upon graduation or the option to attend university (though this last option was often dependent on funding).

This view is echoed in a Bone Bone teacher who claims parents prefer that their children continue their studies via SMKs versus SMAs, due to the applied skill set they learn in these vocational schools that can lead to immediate employment. An agriculture expert in Walenrang added, "…when our children go to SMK, there is more knowledge or skills mastered by them rather than students of SMA. In generally, everything is learned. But in SMK, when he enrolls in one of the major, at least has one skill in the specialized science majors that he takes, that's what people expect."

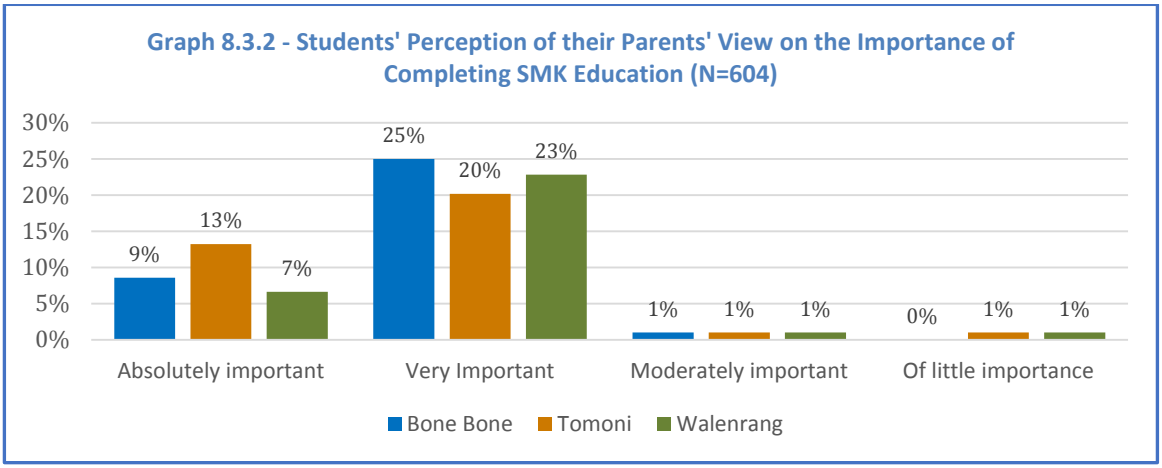
A minority view thought SMKs were inferior to SMAs. A Tomoni SMK teacher contends that vocational school students are academically inferior to high school students (i.e. SMA students), stating that SMK academic competency scores are lower than SMA students and that SMA students have a faster mastery of material compared to SMK students.

8.3 Student Perceptions of Education

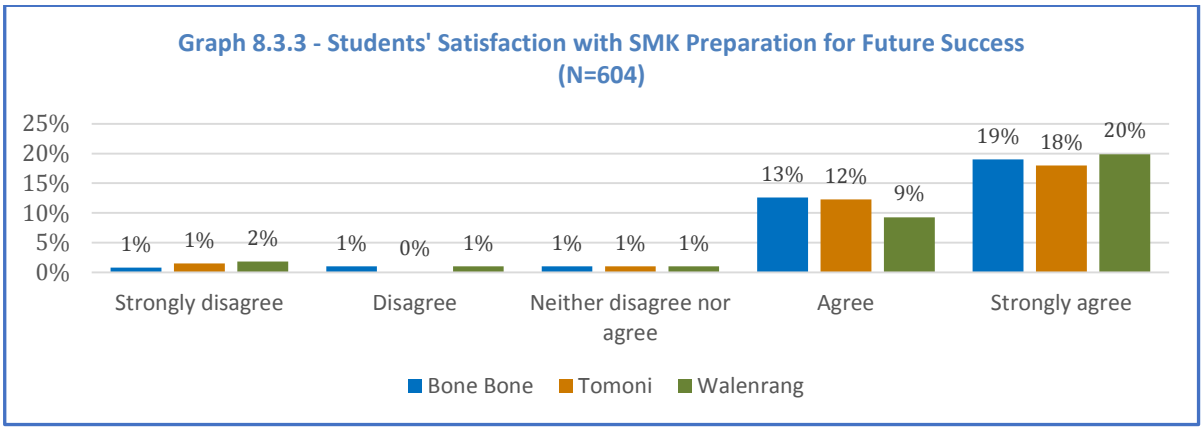
Survey data reveal that almost all students in the three schools view the importance of completing their education as either absolutely or very important (Graph 8.3.1).



Likewise, students feel that their parents have more or less similar views on the importance of graduating from their SMK (Graph 8.3.2).

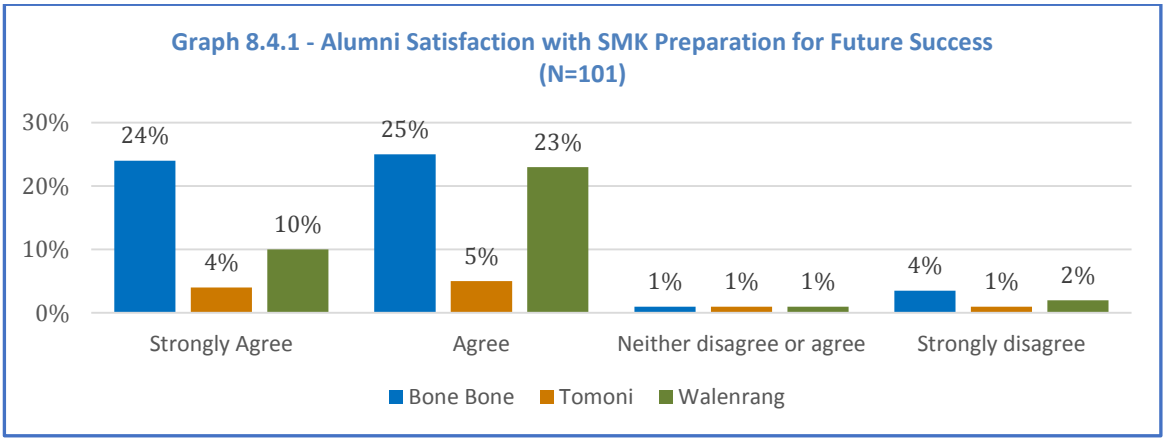


Not only do students feel it is important to graduate, most students agree or strongly agree with the statement that they are satisfied with the way their school has prepared them for a successful future (Graph 8.3.3).

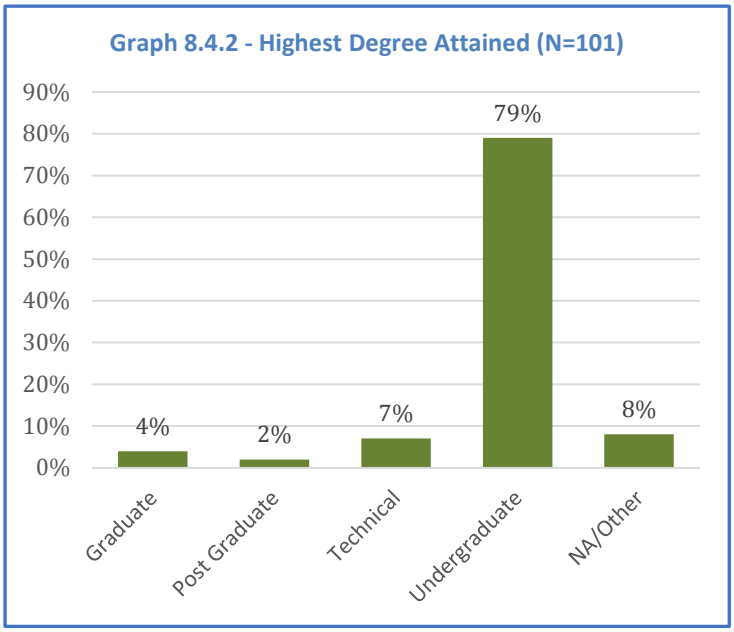


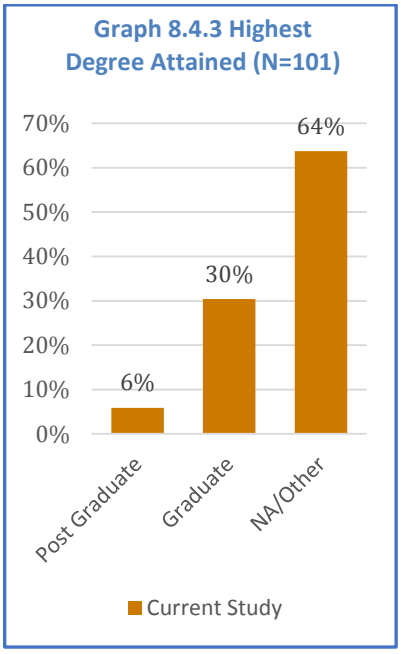
8.4 Alumni Perceptions of Education

Among alumni, a majority were satisfied with the way their SMK prepared them for a successful future.

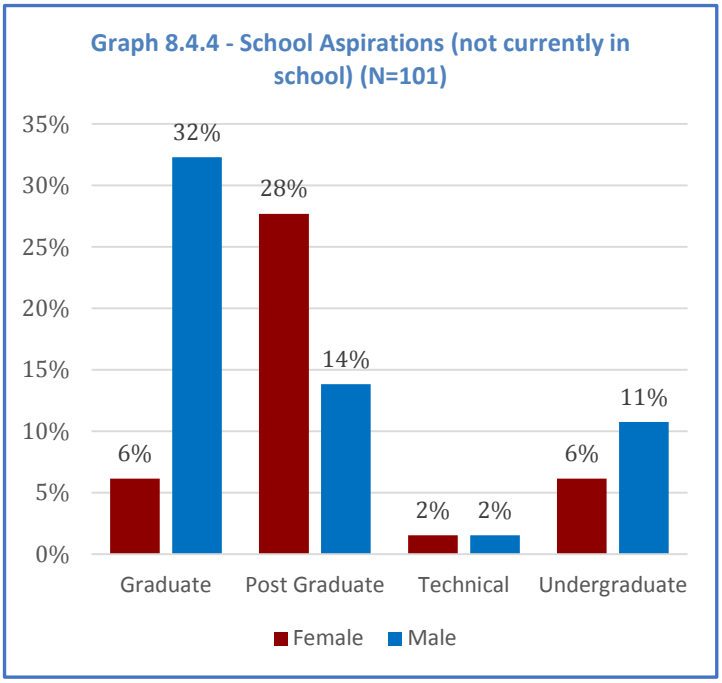


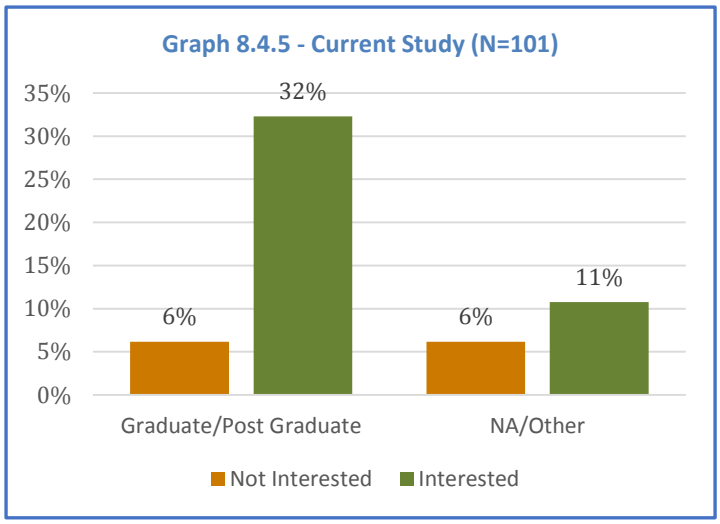
After graduating, most of the alumni pursued an undergraduate degree (see below), regardless of age, gender, and school. For many, their education stopped there, though about a third have either completed a graduate/post-graduate degree (Graph 8.4.2) or are pursuing one currently (Graph 8.4.3):

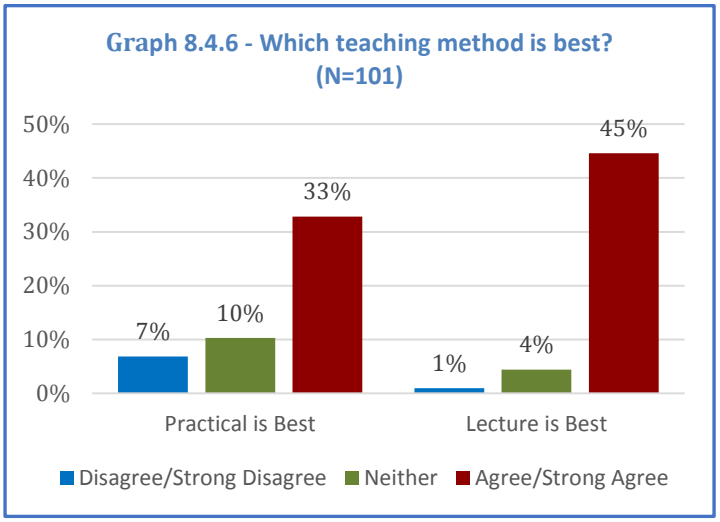




Of the alumni not currently in a graduate/post-graduate program (65 of 101), most had aspirations for further education (Graph 8.4.4). Most expressed a desire to pursue a graduate or post-graduate degree, with only a small portion wanting a technical or undergraduate degree. These relationships were standard across many dimensions, except for gender: Both men and women expressed a preference to further their education, but women were more likely to want a post-graduate degree, while men on average were content with just a graduate degree.





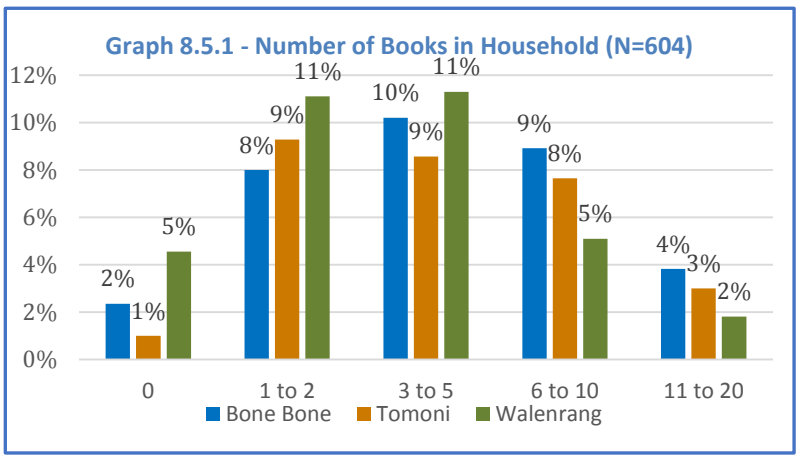


There was also a relationship between the alumni's current studies and their interest in cocoa farming, with those that are not currently in a higher education program being more interested in cocoa farming (Graph 8.4.5).

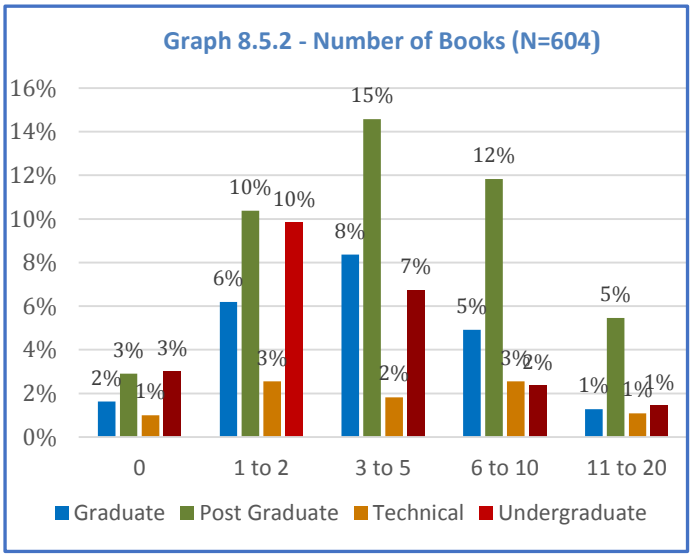
Regarding teaching styles, alumni seemed to like both practical and lecture methods of teaching. However, their reaction to lecture methods was more uniform, with most in support. With practical methods, a significant minority expressed their dislike of the method. This was robust across age and gender (Graph 8.4.6).

8.5 Sources of Information

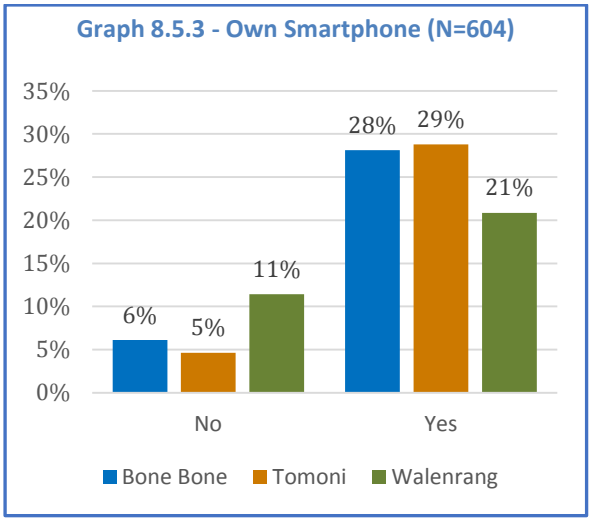
Data analysis shows there is no meaningful difference between schools, genders, or ages when it comes to the sources of information the students utilize. Education can take place beyond the school itself and happen at home or independently. For example, one factor that appears worth investigating further is the impact that the number of books in a household has on a student's performance (Graph 8.5.1).

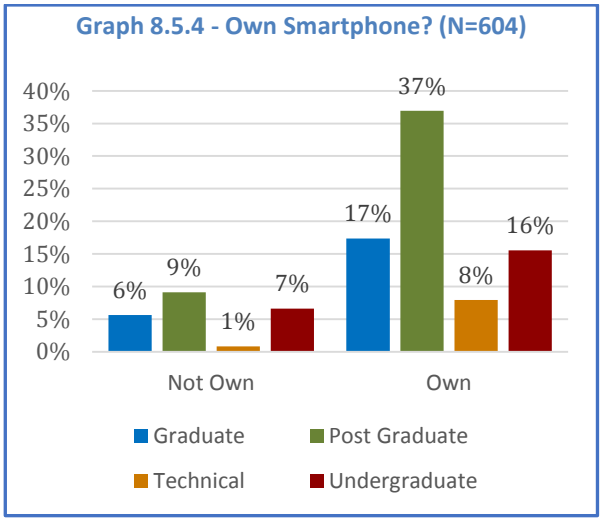


There was a statistically significant relationship between the number of books in a household with "school" and with "school aspirations". The results indicate that households in Walenrang and those that aspire to only undergraduate degrees tend to have a come from households with the lowest number of books (Graph 8.5.2). Of the 134 who aspire to an undergraduate degree, a larger than normal proportion came from Walenrang – and the Walenrang undergraduates had fewer books than the undergraduates from the other schools. The upshot, then, is that being from Walenrang likely increases the likelihood of living in a low-book household, which likely increases the likelihood of having lower schooling aspirations.

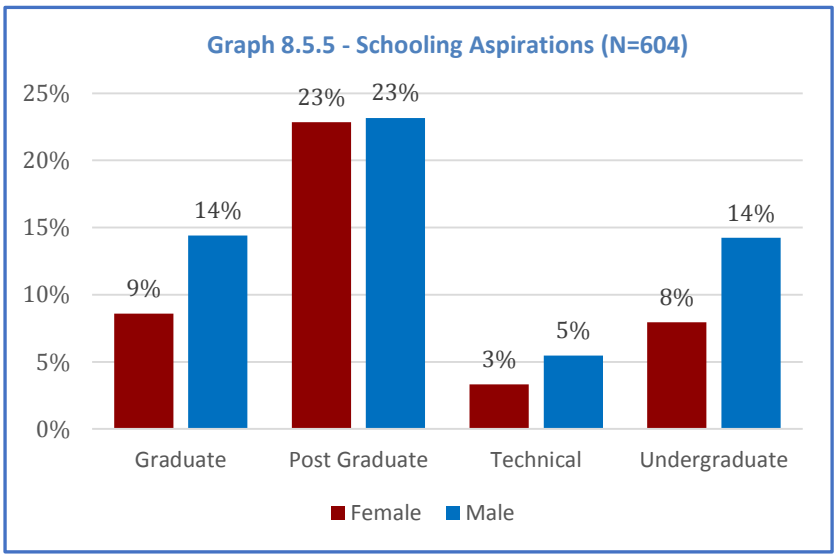


Students also differed in their access to information, and how they were exposed to that information. For example, significantly fewer Walenrang students owned a smartphone as compared to the other schools (Graph 8.5.3). Owning a smartphone is associated with a larger chance that students would want to achieve higher education (Graph 8.5.4).



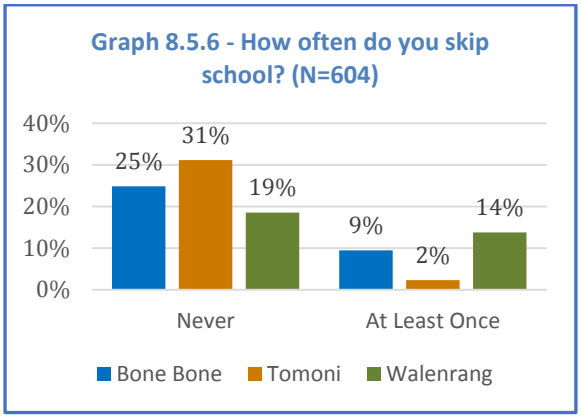


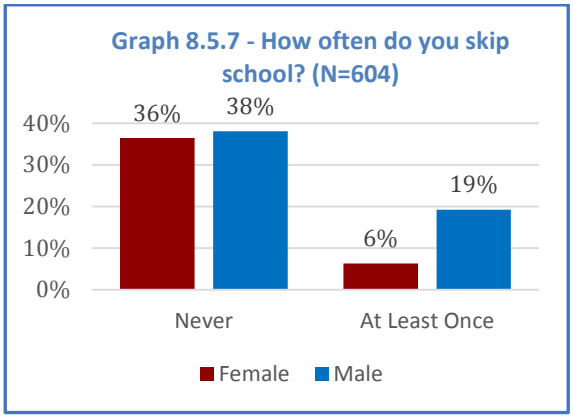
Taken together, these measures indicate that access to information through a smartphone is associated with a larger likelihood of a student pursuing higher education while lowering the likelihood of leaving the area.

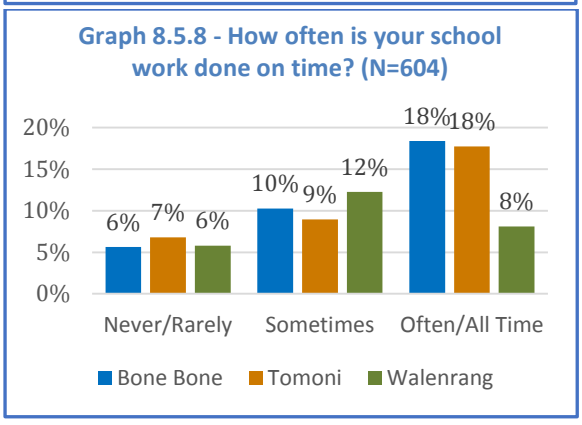


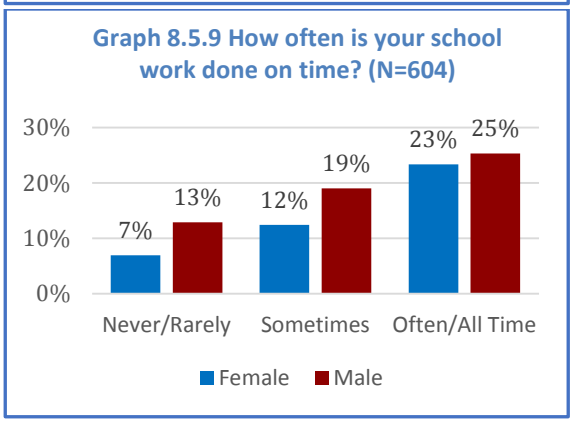
Furthermore, it is also noteworthy that girls disproportionately tend to aim for the highest level of schooling (post-graduate) (Graph 8.5.5). In essence, girls aspire to more education, so if experts wish to make students aspire to higher education, more gains at the margin can be made for boys.

We can also observe whether school attendance and school effort are similar across the schools. The graphs below show that students from Walenrang are more likely to skip school, and that they are less likely to get their work done on time than students from other schools. Additionally, in this variable gender was also a key indicator, with boys being more likely to skip school and more likely to be late with their school work.









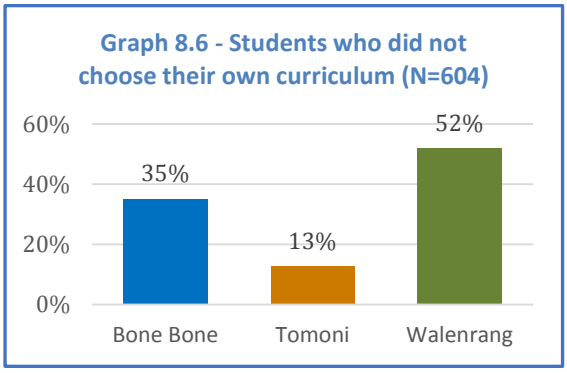
Thus, school programs targeting these individuals could prove to be successful in improving attitudes towards education at the margins.

8.6 Choice of Curriculum

Another important aspect of education concerns the curriculum of study of the students. The respondents seemed to feel that they had a measure of control over their curriculum, with many playing a role in choosing what to study, and very few wishing to change that course of study. The Table 8.6 shows that most students selected the curriculum themselves and relates to agency assets of positive youth development.

Table 8.6 Choose of Curriculum

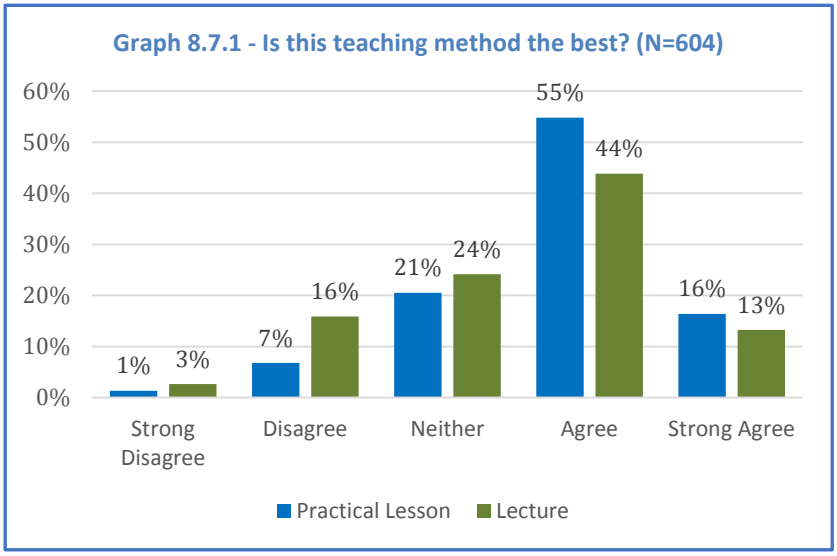
Chooser	Percentage (Could select Multiple)
Yourself	79%
Father	35%
Mother	30%
Sibling	14%
Teacher	6%
Other	5%



Of those that did not play a part in their curriculum (i.e. those who never selected "Yourself"), the majority came from Walenrang. Of the 604 students, 81 wanted to change their curriculum, but this number was not dependent on any school, gender, or age (Graph 8.6).

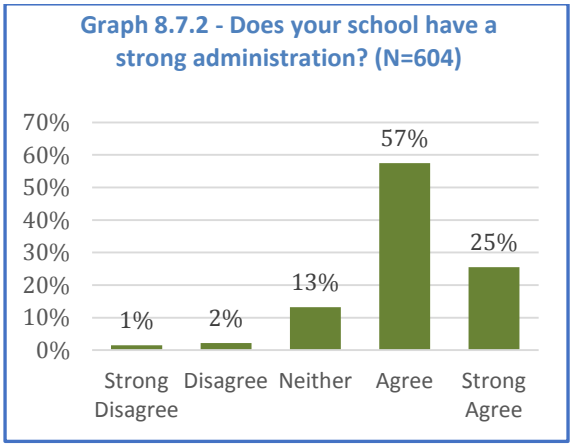
8.7 Quality of Teaching

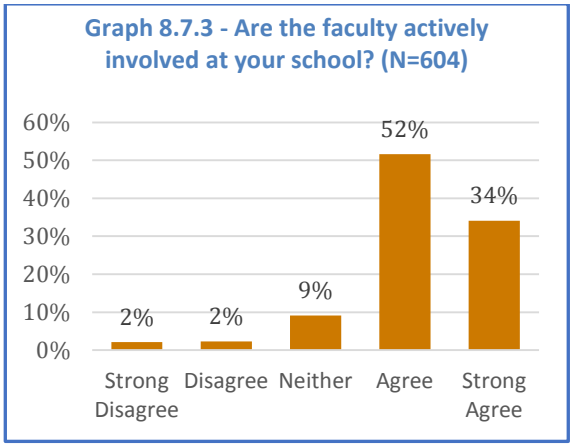
The faculty of the school can also have a significant impact on a student's education. For instance, certain teaching styles may engage students more than other styles, leading to a greater effort from the student and a better likelihood of success. Most students did not convey a strong preference between lecture and practical teaching methods, although overall the respondents leaned towards wanting practical lessons over lecture style classes. Thus, a practical lesson is more likely to engage students. The Graph 8.7.1 shows how many students enjoyed lecture vs. practical teaching methods:



Also important is the school faculty themselves and the administration. A faculty that is involved in the students' lives are more likely to make an impression on the students and convince them to continue their education. These results were robust across age, gender, and schools.

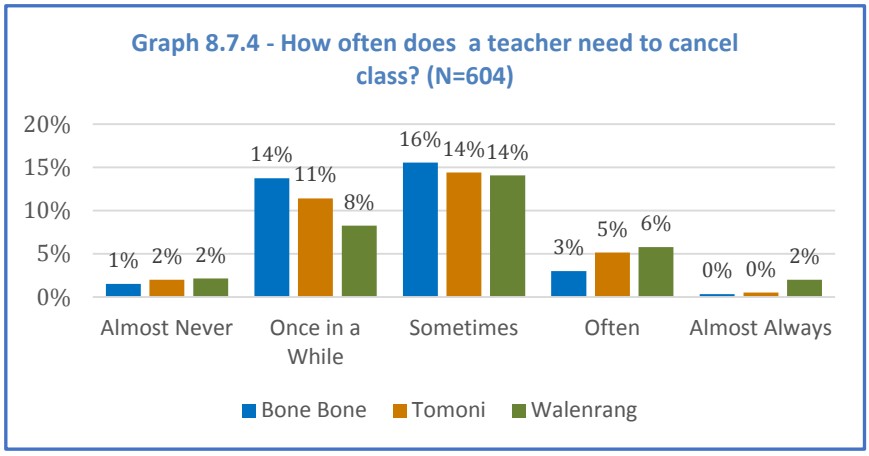
Students, for the most part, indicated that the administration was strong and the faculty actively involved (Graphs 8.7.2 and 8.7.3).





The survey data is confirmed within the focus groups and interviews. A Tomoni focus group among female students revealed a strong relationship with their teachers. One student said, "We always pray together in the school's mosque, so we are close to the teachers. Students are also not awkward to talk with teachers because teachers can provide such motivations to students." Another commented that the lessons are easy to understand and the teachers are fun, with the learning process not boring—serious, but relaxed. A third student quipped, "We usually communicate with our homeroom teacher through WhatsApp related to activities or class issues."

However, while they seemed satisfied with their faculty, it is true that teachers seemed to frequently need to cancel class. This was particularly noticeable in Walenrang, which had the largest proportion of students say that class was "Often" or "Always" canceled.



Among the qualitative data, only one respondent (female student in Bone Bone), mentioned a teacher being late; and one respondent (Tomoni student) that one teacher was always absent. Despite numerous questions enquiring about the quality of teachers and the schools in general in the focus groups and interviews, teacher tardiness and/or absenteeism was not mentioned.

8.8 Critical Thinking and Creativity

Community respondents demonstrate a nuanced understanding of critical thinking and creativity within local education systems, but understood its importance for the future in an increasingly competitive world. Focus group discussion and key informant interview guides for education stakeholders contained a section on critical thinking and creativity. Responses varied in grasping what these phenomena entail, and reveal peripheral concepts deemed

important within SMKs. Tomoni teachers state that some of their students are creative, with students giving new ideas to the teachers, yet the major qualification for this creativity was associated with intelligence. A Bone Bone teacher equated critical thinking with the ability to read fast, and a teacher in Walenrang associated it with character development. Other education stakeholders thought students knew more about technology and social media compared to their teachers. An example given was accessing the internet via students' smartphones has exposed students to a whole new realm of ideas and information. Examples of how these understandings of critical thinking are rewarded in the school systems including giving public accolades or elevating a student to a lab assistant where they can assist others with problem solving—all important actions when students typically receive only criticism or reprimands.

One of the more effective forms of fostering creativity and critical thinking is when schools or education partners host competitions. An example given was a PT Mars-sponsored Luwu Raya Agribusiness Contest. A recent first-place winner was a group of students in agriculture majors who designed a new tool to open cocoa pods, which are quite difficult and dangerous to split. The students experience in their industrial work practices inspired their idea and led to involve other majors like automotive to help weld and assemble the tool. Another example provided by a Tomoni parent was how students are sometime responsible for assembling the computers at school and in turn are often more tech savvy compared to their teachers.

VI - Recommendations

The I4DI team has developed the following recommendations:

- **Improve image of farming** and more specifically, cocoa farming through short, term and long-term strategies that tackle perceptions and systemic issues such as education, use of technology and modernization and general professionalization of farming. Addressing issues of perception of cocoa farming (and farming in general) as the profession for the old that cannot support full time employment and sustainable livelihoods is critical for long sustainability of cocoa sector. To do so,
    a. Consider implementing a public relations campaign to counter the negative image of farming and cocoa farming.
    b. Consider outreach to primary and secondary schools with a positive message around cocoa farming, with smart marketing that leverages storytelling and role modeling. The image needs to start in early grades and target students, teachers, alumni, SMA students, and other community leaders. Traveling Mars PR teams that visit all the regional schools could help raise awareness of the future of cocoa farming.
    c. Consider leveraging the positive image of cocoa doctors and giving them more visibility in communities beyond their current target audience (existing cocoa farmers)
    d. Maximize presence and use of technology among youth and community to deliver messaging and make cocoa farming more tech-savvy

- **Improve material and technical capacity of SMKs to provide practical education to students.** For example, funding directed to supply the schools with better lab equipment would assist with building and implementing better science curriculum.

- **Strengthen the connection between SMKs and cocoa farmers and create concrete opportunities for collaboration**. Consider implementing solutions that leverage mutual interests of SMKs and farmers and provide opportunities for support to farmers that need light technical assistance on their farm and in turn provide valuable apprenticeship and practical learning opportunities to students and alumni.

- **Strengthen teaching and learning environment to foster critical thinking and creativity at SMKs**. Students are lacking critical thinking and creativity, and educational environment is not conducive to it. Incorporation of explicit critical thinking instruction in the classroom (blended into STEM curriculum) may be beneficial. For that to happen, consider the following:
    a) targeted teacher training to improve teachers' ability to foster learning environments that encourage and promote critical thinking and creativity.
    b) ensure that curriculum revisions incorporate strong critical thinking and creativity fostering components
    c) Consider holding contests and expos as a way to foster these important concepts and develop these skills

- **Consider interventions that assist young people with seeking support from trusted sources** when they need it instead of struggling through problems on their own might be needed for complex problems.

- **Create opportunities for youth to positively engage with government and community leadership** on issues concerning community that lead to practical solutions which will be implemented and put into practices (with commitment of resources)
    - **Address issues of concern to youth and community.** The concerns around student self-regulation and substance abuse and gangs came from many groups.
        a. Multifaceted interventions involving students, parents, and teachers may be one way to improve self-regulation. Providing training on organizational skills for students, including time management, coupled with parent and teacher assistance may provide a better environment to enhance self-regulation
        b. While this is not a primary focus of the NextGen project, substance abuse and gang violence is an issue of concern for the community and addressing this issue can provide a leverage for the project and create an avenue for positive role models from SMK students and alumni to be more in the spotlight and contribute to the image issue. This can be done in partnership with other organizations that work in this area and could contribute to increasing the social capital between Mars and the community.

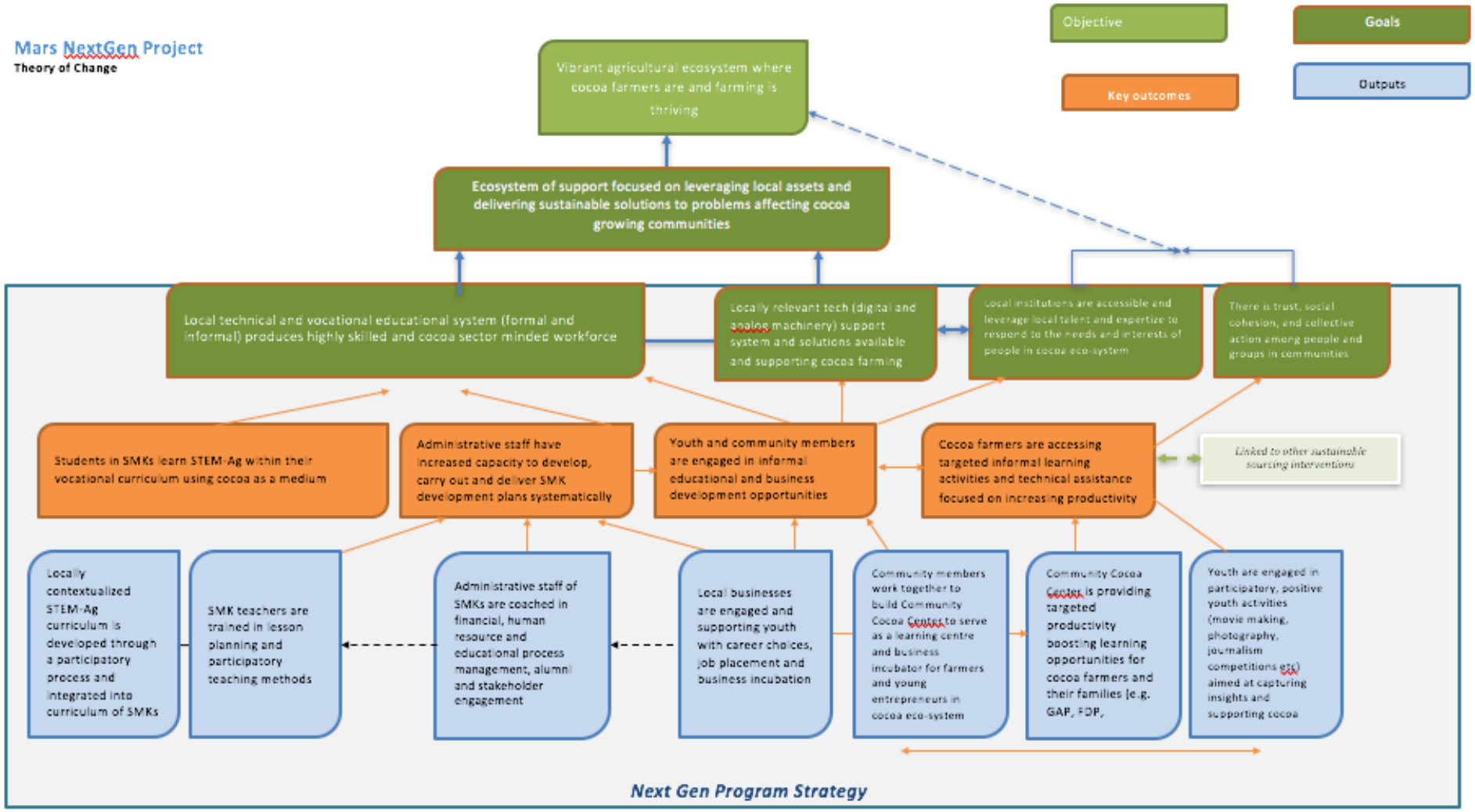
- **Conduct social network analysis (SNA) of Mars-supported cocoa doctors**. Cocoa doctors are key figures in supporting the cocoa ecosystem. As a link between the Mars community and local cocoa farmers, they serve as an important link and source of valuable information. SNA would track the strengths and weaknesses in this vital system of support to current/old farmers, but also potentially identify new areas of support to new farmers and identify a potential role for youth and SMK alumni. SNA also identifies key individuals in the community that maintain "hidden" roles that crucially support the cocoa farming ecosystem.

- **Consider identifying future cocoa farmers with strong leadership potential and attitude toward farming from SMK students and alumni and invest in their modeling into a future type of a professional cocoa farming leaders/role models**. Identify natural leaders and capitalize on their leadership potential for promotion of NextGen program objectives, but also to cultivate leadership traits among other students. The baseline revealed a potential future cohort of cocoa farmers with leadership potential that can be a key investment individuals that Mars could better leverage capacity building with training, funding and additional support to profile them into model farmers.

- **Conduct out Mid and End-line evaluations.** The NextGen project has a strong TOC and a measurement framework that allows it to measure its results well beyond production of Outputs. However, all measurements beyond output levels require data collection that goes beyond regular project monitoring and reporting. Collection of data at mid and end-line would require lower amount of resources compared to the costs of the baseline since the study design and instruments from baseline and its outputs can be replicated for this purpose. Understanding changes at outcome levels can inform project management and scale up efforts and provide robust data to show impact of these kinds of investments.

- **Consider publishing Youth Developmental Assets and Drivers Study component.** The study revealed important contextual insights related to youth developmental assets and cocoa-based economy that can be utilized by a wider set of stakeholders, beyond the NextGen project. To that end, I4DI recommends that the youth developmental assets component of this Baseline study be further teased out based on the existing data set and separated from the project baseline specific components so that it can be published as a separate report. This would contribute to raising the profile of this project and implementing partners and as a tool for advocating for additional development efforts and investments in youth capacity development in this part of Indonesia. Additionally, authors of this report believe that specific sub-elements of this study are suitable for publishing in academic journals which would contribute to future program designs and raising academic and civil society interests in this topic.

VII - NextGen Program Theory of Change



VIII - NextGen Pilot Key Performance Indicators: Insight for Program Improvement

Hierarchy of result		Indicators	Means of Verification	Assumptions
Objective	Ecosystem of support focused on leveraging local assets and delivering sustainable solutions to problems affecting cocoa growing communities	1. Perceptions of cocoa farming community about the future of cocoa-based economy in their community (disaggregated by respondent type and location)	Midline and end of the project survey of sample of SMK students, focus group discussions and KIIs with students, parents, SMK staff, cocoa farmers, local businesses and civil society	Addition of new cocoa-minded businesses and workforce will energize the local community and cocoa-based economy and create conditions conducive to innovation and value-chain creation
Impact level Goals	G1. Local technical and vocational educational system (formal and informal) produces highly skilled and cocoa sector minded workforce	2. % of SMK students who complete their education on time (by vocational track and location) 3. % of students who express interest in pursuing career in, or connected to, cocoa farming eco-system sector (by gender, location, age range and career track) 4. Perceptions of community youth, parents and farming community about quality of Local technical and vocational educational system (formal and informal) as it relates to producing highly skilled and cocoa sector minded workforce (disaggregated by respondent type and location)	Review of SMK student records Midline and end of the project survey of sample of SMK students and focus group discussions and KIIs with students, parents, SMK staff, cocoa farmers, local businesses and civil society	Addition of STEM-Ag components to the curriculum will strengthen overall learning experience and increase critical thinking and creativity among students Use of cocoa as a media for teaching STEM-Ag will change perceptions and increase interest among students of all vocational tracks to seek future careers in cocoa eco-system

	G2. Locally relevant tech (digital and analog machinery) support system and solutions available and supporting cocoa farming	5. # of solutions or new innovations developed as a result of the project interventions (by type, purpose and source) 6. % of targeted cocoa farmers accessing solutions and new innovations (by type (FDP/non-FDP, part of cocoa doctor network or not), location and solution accessed)	Quarterly/Semi-annual survey of new tools and new businesses and review of their records Survey of a sample of cocoa farmers in targeted communities	Training and incubation support for youth and new businesses will be sufficient to unlock the innovation potential and initiate the development of relevant solutions and their delivery to the market
	G3. Local institutions are accessible and leverage local talent and expertise to respond to the needs and interests of people in cocoa eco-system	7. Perceptions of community members of accessibility and responsiveness of local small businesses and SMK schools to the needs of people in cocoa eco-system (disaggregated by respondent type and location) 8. % of youth and community members who express interest in working on finding solutions to complex problems facing cocoa sector economy (disaggregated by respondent type and location)	Midline and end of the project survey of sample of SMK students and focus group discussions and KIIs with students, parents, SMK staff, cocoa farmers, local small businesses and civil society	Local small businesses and other institutions in communities remain active and supportive of policies that increase access. Local businesses are necessary to a thriving cocoa ecosystem. SMKs remain interested in supporting alumni engagement.
	G4. There is trust, social cohesion, and collective action among people and groups in communities	9. Changes in Perceptions of targeted community members about level of social capital in their communities (between people and people, people and institutions, and among institutions in cocoa eco-system)	Midline and end of the project survey of sample of SMK students and focus group discussions and KIIs with students, parents, SMK staff, cocoa farmers, local businesses and civil society	Communities will remain intact without major external disruptions Community members will remain receptive of social capital building initiatives

		(disaggregated by respondent type and location) 10. % of students and community youth interested in working on finding solutions to problems facing their local community (disaggregated by respondent type and location)		Interest in and ownership of community development among students and youth will lead to decisions that prioritize rural over urban life
Outcomes	Outcome 1. Students in formal institutions of learning (SMKs) learn STEM-Ag within their vocational curriculum using cocoa as a medium	11. % of students receiving STEM-AG curriculum through the course of their study (by vocational track and grade level) 12. % student satisfaction with STEM-Ag learning content and delivery (by vocational track and grade level)	Semi-annual review of school records Midline and end of the project survey of sample of SMK students and focus group discussions and KIIs with students, parents, SMK staff, cocoa farmers, local businesses and civil society Project training records	Government is supportive of curriculum implementation and STEM-Ag augmentation of the curriculum will be officially approved and included in the lesson plans upon completion of the curriculum revisions Teacher ownership of curriculum design will lead to teacher and administrative, as well as government, support for implementation of curriculum
	Outcome 2. Administrative staff have increased capacity to develop, carry out and deliver SMK development plans systematically	13. % of actions in SMK development plans implemented within school year	Midline and end of the project survey of sample of SMK students and focus group discussions and KIIs with students, parents, SMK staff, cocoa farmers, local businesses and civil society Project training records	Administrative staff are receptive to learning new processes and gaining/applying new skills

	Outcome 3. Youth and community members are engaged in informal educational and business development opportunities focused on cocoa eco-system	14. Proportion of targeted community members who are aware of project activities and express satisfaction with services offered (disaggregated by type and location) 15. # of new business focused on cocoa eco-system started as a result of the project (by business type, location, gender and age)	Midline and end of the project survey of sample of SMK students and focus group discussions and KIIs with students, parents, SMK staff, cocoa farmers, local businesses and civil society	Youth and community members have interest in educational and business development opportunities focused on cocoa eco-system
	Outcome 4. Cocoa farmers are supported with targeted informal learning activities and technical assistance focused on increasing productivity	16. % of farmers and community members who received assistance and express satisfaction targeted informal learning activities and technical assistance activities provided by the project (disaggregated by farmer type (FDP/non-FDP, cocoa doctor network, location, age, gender)	Survey of a sample of cocoa farmers in targeted communities Review of FDP and cocoa doctor data	Cocoa farmers will see value in training and technical assistance offered Cocoa farmers will be able to apply skills and knowledge learned in their work on the farm
Outputs	Output 1.1.Locally contextualized STEM-Ag curriculum is developed and used in a participatory process in SMK pilot schools	17. # of curriculum modules developed and delivered on time 18. # of stakeholders actively engaged in curriculum development process (by stakeholder type) # of cocoa trees planted at SMK for educational use	School records Project records on the process of curriculum development and participation of stakeholders	SMK teaching and administrative staff see the need for revisions to the curriculum and value integrating STEM-Ag into curriculum using cocoa as a medium STEM-Ag additions to the curriculum are welcomed by SMK teaching and administrative staff

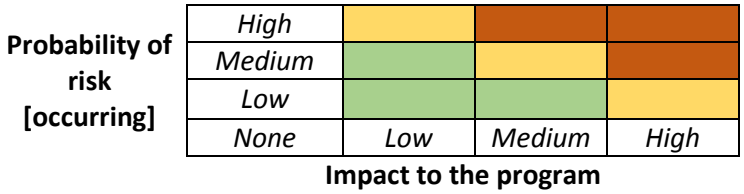
	Output 1.2. SMK teachers are trained in lesson planning and participatory teaching methods	19. # of teacher training workshops carried out (by location, workshop type and number of participants) 20. % of eligible SMK teachers who successfully completed a full training package (by training, teacher type and school)	Project training records School records	Teachers in targeted SMK will be able to participate and receptive to training
	Output 2.1. Administrative staff of SMKs are coached in financial, human resource and educational process management, alumni and stakeholder engagement	21. # and type of administrative staff receiving coaching (disaggregated by position, school and coaching topic)	Project training records School records	Administrative staff of SMK will be receptive to training in topics provided by the project
	Output 3.1. Local businesses within cocoa eco-system are engaged and supporting youth with career choices, job placement and business incubation	22. # of local businesses engaged in youth and business development support activities (by activity type, business type and location)	Project records documenting local businesses' involvement Project records from business incubation and start-up activities	Local businesses will invest their time and resources to engage and see value in participating in career and job placement activities
	Output 3.2. Community members work together to build Cocoa community centre to serve as a learning centre and business incubator for farmers and young entrepreneurs in cocoa eco-system	23. # of voluntary person-hours spent on building the Cocoa community centre (disaggregated by type of work, people engaged, and gender) 24. # of learning events held at Cocoa Community Centre	Project records and volunteer registration and time-tracking sheets	Community members will provide voluntary labor to build community centre (Rumah Cokolat) when provided with other material and technical resources needed
	Output 3.3. Youth are engaged in participatory, positive youth activities aimed at	25. # of youth engaged in Youth Cultural and Artistic Activities Focused on Cocoa Ecosystem	Project records from youth engagement activities	Youth are interested in participating in creative

	capturing insights and supporting cocoa eco-system	(disaggregated by activity type, gender, age range and location)		activities focused on cocoa eco-system
	Output 4.1. cocoa community centre (Rumah cokolat) is providing targeted productivity boosting learning opportunities for youth, cocoa farmers and their families (e.g. GAP, FDP, diversification, alternative income generation etc)	26.% of farmers referred by Mars CDC and facilitators to cocoa community centre for learning activities completing required training (disaggregated by type (FDP/non-FDP), location, referring associate and type of learning required) 27. # of youth engaged in informal learning using STEM-Ag, community oriented curriculum	Cocoa community centre (Rumah Chocolat) event attendance and delivery records Project records	Farmers will be receptive to referrals and targeted training opportunities Farmers and youth will be receptive to informal, community oriented, learning opportunities
Activities of Output 1.1	1.1.1 Pilot introduction and preparation workshop with SMKs			
	1.1.2 MOU Event with SMKs and Government Stakeholders			
	1.1.3 Curriculum Development Design Workshops			
	1.1.4 Cocoa Tree Planting at SMK Walenrang			
	1.1.5 Curriculum implementation over 1 school year			
	1.1.6 Curriculum Refresher and Launch Workshop			
	1.1.7 New School Year Curriculum Planning and Preparation Workshop			
Activities of Output 1.2	1.2.1 Teacher Training Workshops (teaching methodology)			
	1.2.2 Teacher Agronomy Training at Mars Academy			
Activities of Output 2.1	2.1.1 SMK Development Plan Formation Workshops with SMK administrators			
	2.1.2 SMK and Student Families Workshops on Strengthening School and Cocoa Community			
	2.1.3 Ongoing visits to SMKs for administrative capacity building and teacher observation & coaching			
	2.1.4 Workshop to Plan and Support Additional SMKs to Scale Pilot			
	2.1.5 Alumni and Student Careers Day Event			
Activities of Output 3.1	3.1.1 SMK, Local Government and Local Small Business Meetings and Jobfair Events			
	3.1.2 Launch Event for Small Business Incubator			
	3.1.3 Completion Event for Small Business Incubator			

	3.1.4 Small Business Incubator Expert Lectures and Coaching
	3.1.5 Small Business Incubator Field Trips to Mars Facilities and Local Businesses
	3.1.6 Small Business Incubator Participant Training
	3.1.7 Event for Local Government and Small Businesses at Cocoa Community Centre
Activities of Output 3.2	3.2.1 Construction and Set-up of Cocoa Community Centre
Activities of Output 3.3	3.3.1 Student Field Trips to Mars Facilities
	3.3.2 Community Youth Group Meetings
	3.3.3 Community Youth Group Facilitator Trainings
	3.3.4 Social Media Campaigns on Cocoa ecosystem Led by Youth
	3.3.5 Implementation of non-formal, community oriented, STEM-Ag youth curriculum
Activities of Output 4.1	4.1.1 Community Cocoa Workshops
	4.1.2 Ongoing Youth Cultural and Artistic Activities Focused on Cocoa Ecosystem
	4.1.3 FDP and GAP Workshops for Farmers
	4.1.4 Field Trips for Community Youth to Mars Facilities
	4.1.5 Identification of Youth Cocoa Ambassadors to Facilitate Centre Activities
	4.1.6 Farmer Appreciation and Awards Event
	4.1.7 Event for local community to sell and showcase raw cocoa derivative products (jewelry, art, cultural artifacts etc.)

IX - Risk Assessment

Risk are conditions that may affect the program over which there is little to no control. Left unmonitored, risks become issues and issues can become unnecessary change requests that may result in cost implications. The following diagram illustrates that any medium - high *probability* risk with a medium – high *[negative] impact* on the program, *must be monitored.*



This current (January 2018) risk assessment for the NextGen Project identifies *2 high probability / high impact risks* and *1 medium probability / high impact risks*. These 3 risks should be prioritized for monitoring as long as they remain in either of these two categories. However, all other risks should also be regularly assessed as long as they are identified as such.

Project team is responsible to regularly monitor the risks identified for their respective near-term outcome and outputs, while Swisscontact and MSI may want to take the responsibility to monitor risks at higher levels of the TOC:

1. The mid-term evaluation should be the first assessment point for all risks, at which point this table should be updated.
2. *At a minimum* project team must update this risk analysis prior to quarterly reviews, but ideally, they should update the table and notify the other implementing partners as soon as a risk probability or impact rating changes.
3. MSI and Swisscontact should consider reviewing this risk analysis as part of semi-annual or quarterly report reviews.

Hierarchy of objectives. This demonstrates the logic from activities to the outcomes and goal.		**Assumptions are factors outside the control of the program, but understanding and monitoring them over time is important to the program's success.**	**How likely is this assumption to fail? Is this level of risk in the future or right now?**	**If it fails, how severe will the impact on the program be?**	**Who is responsible to monitor the risk?**	**Who is responsible to manage the risk?**
Objective	Ecosystem of support focused on leveraging local assets and delivering sustainable solutions to problems affecting cocoa growing communities	Addition of new cocoa-minded businesses and workforce will energize the local community and cocoa-based economy and create conditions conducive to innovation and value-chain creation	Low	High	Project Team	Mars Indonesia

Impact level Goals	G1. Local technical and vocational educational system (formal and informal) produces highly skilled and cocoa sector minded workforce	Addition of STEM-Ag components to the curriculum will strengthen overall learning experience and increase critical thinking and creativity among students	Low	Medium	Project Team	Mars Indonesia
		Use of cocoa as a media for teaching STEM-Ag will change perceptions and increase interest among students of all vocational tracks to seek future careers in cocoa eco-system	Low	Medium	Project Team	Mars Indonesia
	G2. Locally relevant tech (digital and analog machinery) support system and solutions available and supporting cocoa farming	Training and incubation support for youth and new businesses will be sufficient to unlock the innovation potential and initiate the development of relevant solutions and their delivery to the market	Medium	Medium	Project Team	Mars Indonesia
	G3. Local institutions are accessible and leverage local talent and expertise to respond to the needs and interests of people in cocoa eco-system	Local small businesses and other institutions in communities remain active and supportive of policies that increase access.	Low	Medium	Mars Indonesia	Mars Indonesia
		SMKs remain interested in supporting alumni engagement.	Medium	Medium	Project Team	Mars Indonesia
	G4. There is trust, social cohesion, and collective action among people	Communities will remain intact without major external disruptions	Low	High	Project Team	Mars Indonesia

	and groups in communities	Community members will remain receptive of social capital building initiatives	Low	Medium	Project Team	Mars Indonesia
		Interest in and ownership of community development among students and youth will lead to decisions that prioritize rural over urban life	High	Medium	Project Team	Mars Indonesia
Outcomes	Outcome 1. Students in formal institutions of learning (SMKs) learn STEM-Ag within their vocational curriculum using cocoa as a medium	Government is supportive of curriculum implementation and STEM-Ag augmentation of the curriculum will be officially approved and included in the lesson plans upon completion of the curriculum revisions	Medium	Medium	Project Team	Mars Indonesia
		Teacher ownership of curriculum design will lead to teacher and administrative, as well as government, support for implementation of curriculum	High	High	Project Team	Mars Indonesia
	Outcome 2. Administrative staff have increased capacity to develop, carry out and deliver SMK development plans systematically	Administrative staff are receptive to learning new processes and gaining/applying new skills	Medium	Medium	Project Team	Mars Indonesia
	Outcome 3. Youth and community members are engaged in informal	Youth and community members have interest in educational and business	Low	Medium	Project Team	Mars Indonesia

	educational and business development opportunities focused on cocoa eco-system	development opportunities focused on cocoa eco-system				
	Outcome 4. Cocoa farmers are supported with targeted informal learning activities and technical assistance focused on increasing productivity	Cocoa farmers will see value in training and technical assistance offered	Low	High	Project Team	Mars Indonesia
		Cocoa farmers will be able to apply skills and knowledge learned in their work on the farm	Low	High	Project Team	Mars Indonesia
Outputs	Output 1.1.Locally contextualized STEM-Ag curriculum is developed and used in a participatory process in SMK pilot schools	SMK teaching and administrative staff see the need for revisions to the curriculum and value integrating STEM-Ag into curriculum using cocoa as a medium	Low	High	Project Team	Mars Indonesia
		STEM-Ag additions to the curriculum are welcomed by SMK teaching and administrative staff	Low	High	Project Team	Mars Indonesia
	Output 1.2. SMK teachers are trained in lesson planning and participatory teaching methods	Teachers in targeted SMK will be able to participate and receptive to training	Low	Medium	Project Team	Mars Indonesia
	Output 2.1. Administrative staff of SMKs are coached in financial, human resource and educational process management, alumni and stakeholder engagement	Administrative staff of SMK will be receptive to training in topics provided by the project	Medium	Medium	Project Team	Mars Indonesia
	Output 3.1. Local businesses within cocoa eco-system are	Local businesses will invest their time and resources to engage and see	Medium	High	Project Team	Mars Indonesia

	engaged and supporting youth with career choices, job placement and business incubation	value in participating in career and job placement activities				
	Output 3.2. Community members work together to build Cocoa community centre to serve as a learning centre and business incubator for farmers and young entrepreneurs in cocoa eco-system	Community members will provide voluntary labor to build community centre (Rumah Cokolat) when provided with other material and technical resources needed	High	High	Project Team	Mars Indonesia
	Output 3.3. Youth are engaged in participatory, positive youth activities aimed at capturing insights and supporting cocoa eco-system	Youth are interested in participating in creative activities focused on cocoa eco-system	Low	Medium	Project Team	Mars Indonesia
	Output 4.1. cocoa community centre is providing targeted productivity boosting learning opportunities for youth, cocoa farmers and their families (e.g. GAP, FDP, diversification, alternative income generation etc)	Farmers will be receptive to referrals and targeted training opportunities	Low	Medium	Project Team	Mars Indonesia
		Farmers and youth will be receptive to informal, community oriented, learning opportunities	Low	Medium	Project Team	Mars Indonesia

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