

# ELEMENTARY SCHOOL AND AGRICULTURE REGENERATION: LOOKING AT ELEMENTARY SCHOOL STUDENTS' PERCEPTIONS OF WORK IN THE AGRICULTURAL SECTOR AND THE INFLUENCING FACTORS

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**Abstract.** There are various reasons for the decline in interest of young workers in the agricultural sector, especially the low regeneration of young people working in the agricultural sector. This research focuses on the work aspirations of elementary school students, especially regarding agriculture which is narrated in elementary schools and elementary school students' views on work in the agricultural sector. Elementary school plays an important role in developing initial ideas about a job. Employment aspirations in villages are strongly influenced by how basic education builds narratives about the existing jobs. This research found students who have experience in agriculture sector tend to have positive perception towards agricultural work.

**Keywords:** agricultural regeneration; elementary school; student's perception

## I. INTRODUCTION

Historically, Indonesia is known as an agricultural country as evidenced by the achievement of self-sufficiency in 1984. The position of agriculture is also very important in the structure of the Indonesian economy [1]. According to BPS [2] the agricultural sector has the second largest contribution, after the industrial sector processing, to Gross Domestic Product (GDP). The urgency of the agricultural sector in Indonesia is not only limited to its contribution to Gross Domestic Product (GDP) but also to the national food supply in Indonesia considering that Indonesia's population continues to increase from year to year, even now Indonesia's population has reached 265 million [1]. However, this condition is faced with the opposite situation, the number of workers working in the agricultural sector is decreasing from year to year and there is an opinion that young workers are not interested in working in the agricultural sector. The phenomenon of young people's disinterest in working in the agricultural sector is caused by several things, including: (1) The high rate of conversion of rice fields to land that is not used for paddy fields or agriculture so that the accessibility of land for farmers, both young and old, is very limited. (2) Economically, young people consider the agricultural sector to be less profitable, although this is not always the case. (3) The social system surrounding youth tends to construct the value of agriculture negatively. (4) Agriculture is considered not prestigious by young people in the village [3]; [1]; [4].

There are various reasons for the decline in interest of young workers in the agricultural sector, especially the low

regeneration of young people working in the agricultural sector. This condition raises concerns because it could have an impact on national food stability. Several studies have identified the main factors for rural youth, here are several factors, including: (1) The high conversion of land from agricultural land to non-agricultural land so that access to land for young people is increasingly difficult. (3) The social system surrounding youth tends to construct the value of agriculture negatively. (4) Agriculture is considered not prestigious by village youth ([5] [3];[6]). Youth participation in the agricultural sector will be greatly influenced by their attitudes towards work in the agricultural sector. Adolescents' attitudes cannot be separated from the main actors in forming attitudes, namely parents, friends, mass media and the school education system. This research focuses on the work aspirations of elementary school students, especially regarding agriculture which is narrated in elementary schools and elementary school students' views on work in the agricultural sector. Elementary school plays an important role in developing initial ideas about a job. Employment aspirations in villages are strongly influenced by how basic education builds narratives about existing jobs [7]. This research has several research questions, as follows, (1) What is the perception of SDIT students regarding the work in the agricultural sector? (2) How are students involved in agricultural activities by teachers and parents? (3) Is there a relationship between teacher and parent involvement in agricultural activities and students' perceptions of work in the agricultural sector?

## II. RESEARCH METHODS

This research was carried out at one of the Islamic Elementary School (SDIT) located in Cibinong District, Bogor Regency. This location was chosen because SDIT in this place is one of the leading SDITs in Bogor Regency and has activities related to the natural environment, it is a school that has plantation and agricultural land, with agricultural land it is very important to remember that direct planting activities like this will teach many things and form important characters in children starting from discipline, as well as is located in Cibinong District, which incidentally is an urban area. The research period was approximately 15 months, starting from October 2021 to May 2022. A total of 80 students from grades 5 and 6 were purposively selected as research samples from a population of 100 students in grades 5 and 6. Classes 5 and 6 were chosen as research objects because they already had some experience related to nature and agricultural activities from school.

## III. RESULTS AND DISCUSSION

### Student Characteristics

#### Gender

Gender is the physical characteristics of the respondent recorded in the respondent's identity list, namely male and female. In this study, gender was seen as an internal characteristic of the respondent until this research was conducted.

Table 1. Gender Distribution of Students

Type Sex	Frequency (Person)	Percent (%)
Male	41	51,25
Female	39	48,75
Total (n)	80	100

(Primary Data Source, Processed 2022)

From the results of data processing, the number of respondents based on gender consisted of 51.25 percent with 41 men and 48.75 percent with 39 women. These results indicate that the respondents in this study were dominated by male respondents.

#### By Age

Age is the length of a person's life from birth until the time this research is carried out, meanwhile operationally this research looks at age as a reference for this research.

Table 2. Age distribution of students

Student Age	Frequency (Person)	Present (%)
10 years	4	5
11 years old	30	37,5
12 years old	38	47,5
13 years old	8	10
Total (n)	80	100

Respondents based on age were divided into four groups. The first group is aged around 10 years with a number of respondents of 5 percent, the second is 11 years with a number of respondents of 37.5 percent, the third is 12 years with a number of respondents of 38 percent, the fourth is 13 years with a number of respondents of 10 percent. These results indicate that the respondents in this study were dominated by students aged 12 years. Based on the observation results, the reason why the 12-year age group dominates is because the questionnaires were distributed to students in grades 5 and 6 nearby.

### Student Farming Experience with Teacher

The farming experience of students and teachers in this research is defined as joint activities between teachers and students in activities related to agriculture or plantations, whether in activities at school or agro-educational activities in the village.

Table 3. Distribution of Students' Farming Experience with Teachers

Farming Experience with Teachers	Frequency (People)	Percent (%)
Once	68	85
Never	12	15
Total (n)	80	100

Based on the distribution of farming experience, students and teachers have two answers. The percentage of students who answered agree was 85 percent, and 15 percent of students who answered disagreed. Based on this data, out of 80 students, 68 students answered agree and 12 students answered disagree. The form of teacher teaching in teaching elementary school children to love agriculture is the Agro-Tourism program. This program brings agricultural learning closer to school children. Not just planting rice, but students are also taught to cultivate land, process these commodities until agricultural products become something that can be consumed. Apart from special programs, agricultural material is also included in thematic themes, namely themes related to agricultural products. The form of agricultural activity carried out by the school is the practice of planting rice on the land behind the school.

### Student Farming Experience with Parents

The experience when students farm with their parents at home, of course, has different answers for each student, this data is in table 4.5.

Table 4. Distribution of Students' Farming/Gardening Experiences with Their Parents

Experience Old Man Farming	Frequency (People)	Percent (%)
Once	70	87,5
Never	10	12,5
Total (n)	80	100

Based on the distribution of farming experience, students and their parents have two answers. Students who answered that they had never been involved in gardening/farming with their parents were 87.5 percent, and students who answered that they had never been involved in gardening/farming with their parents was 12.5 percent. In general, elementary school students are often involved by their parents in edu-agrotourism activities at tourist attractions or by teaching them to plant plants at home, either in the yard or in pots [12].

#### *Student Perceptions of Work in the Agricultural Sector Based on Cognition Indicators*

Cognition is an individual's inner belief in a stimulus. This belief will emerge when the individual understands the existence of a stimulus or stimulation. In this study, researchers wanted to find out how students understand the image of agriculture.

Table 6. Explanation of Students' Cognitive Indicators regarding Agriculture

Cognition	Item Average Score	Total Average Score	
Fertilizer	1,15	2,59	Students really don't know that excessive fertilizer can damage the environment
Nursery	2,81		Students understand that seed selection determines results harvest
Hoe Tools	2,86		Students understand that a hoe is an internal tool farming
Tractor	2,98		Students understand that a tractor is an internal tool Farming
Irrigation	2,90		Students understand that irrigation is the most important thing in farming
Paddy	2,86		Students understand that rice is an agricultural crop major in Indonesia.

Note: 1-1.67: Very Low; 1.68 – 2.35: Low; 2.36 – 3: High

If looked at in more detail, it can be seen that students have high knowledge regarding the use of tractors and the role of irrigation in agriculture. The students admitted that they knew about the role of tractors and irrigation from thematic materials related to the environment or nature (average scores 2.98 and 2.90). Meanwhile, students have low knowledge about the negative impacts of excessive use of chemical fertilizers on agriculture. One of the teachers explained that there were themes related to agriculture, especially related to the use of natural resources in Indonesia, where one of the materials talked about agricultural cultivation and agricultural products in Indonesia. Material about agriculture plays a very

important role in the process of agricultural regeneration, one of the studies [8], the study found that jobs in villages will be greatly influenced by the representation of jobs in the village. Students at SDIT gain knowledge about agriculture in several activities, some of which are included in the learning curriculum such as thematic material related to the benefits of agricultural resources, ways to increase agricultural yields. Apart from that, knowledge about agriculture is also provided when there are field trips to agricultural locations, such as planting rice, bathing buffalo, and plowing rice fields.

#### *Based on Affection Indicators*

Affection is a human need to get a good response or warm treatment from other people. In this research, the affection aspect is a student's sense of interest/disinterest in work in the agricultural sector.

Table 8. Explanation of indicators of student affection towards agricultural activities

Affection	Item Average Score	Total Average Score	Information
The student's desire to later farm after graduation	1,96	1,97	Students are less interested in farming when they finish school
Helping Parents in the Garden /Field Fields	2,36		Students are interested in going to school to help their parents in the fields
Weeding grass at school/home	2,30		Students are less interested in weeding the grass in the fields
Dreams of becoming a farmer	1,48		Students are not very interested in becoming farmers
Selling agricultural products	2,25		Students are less interested in processing and selling their crops
Interest in Becoming a Farmer	1,81		Students are less interested in becoming farmers when they are old
Future job as a farmer	1,63		Students are less interested in aspiring to become farmers

Description: 1-1.67: Very Disinterested; 1.68 – 2.35: Less Interested; 2.36 – 3: Interested

If examined in more detail, this research found that low affection for work in the agricultural sector was caused by students not being interested in making agriculture their future job, nor were they interested in aspiring to (1.48 and 1.63). Meanwhile, there is still little hope in the aspect of involvement in agricultural activities, where students still want to be involved in helping their parents in gardening or farming and helping clean grass at home and at school (2.35). This condition is in line with the findings [3] who said that

young people are relatively uninterested in working in the agricultural sector, but that does not mean they do not want to be involved in agricultural activities. In several studies, found that they were still involved in helping their parents in the fields and their parents still involved them with considerations of saving production costs (family labor) [5] [1].

They got this opinion from their experiences when they took part in educational tourism activities to agricultural locations. Negative attitudes regarding agriculture were also found in research conducted by [5] Nugraha and Nugraha & Herawati [3] who found that young people were still relatively uninterested in working in the agricultural sector when they were young, because according to them working in the agricultural sector is hard because you have to be in the heat and have to get dirty when farming. However, not being interested in working in the agricultural sector does not mean they do not want to help their parents in farming. Nugraha & Herawati [5] found that young people in villages still want to be involved in helping their parents in farming as family workers (Family Labor) [9].

#### Based on Psychomotor Indicators

Psychomotor is a domain related to skills or the ability to act after a person receives certain learning experiences. In this research, the psychomotor aspect is defined as students' ability to practice basic agricultural techniques in accordance with the learning about agriculture that they have experienced in class.

Table 10. Explanation of students' psychomotor indicators regarding work in the agricultural sector

Psychomotor	Item Average Score	Psychomotor Average Score	Information
Developing Rice Planting Capabilities	2.4	2.35	Students are able to practice planting rice
Participate in Plowing the Fields	2.5		Students are able to plow fields with a tractor
Practicing Agricultural Messages from School	2.5		Students are able to practice agricultural material taught at school.
Farming Practices	2.6		Students are able to practice agricultural farming
Using a Hoe	2.4		Students are able to use a hoe
Providing Fertilizer	1.9		Students are unable to provide fertilizer to plants
Mixing Fertilizer	1.8		Students are unable to mix fertilizer on plants

Description: 1-1.67: Very Incompetent; 1.68 – 2.35: Less able to practice; 2.36 – 3: Able to practice

Table 10 above shows that there are several indicators that can indicate students' psychomotor aspects related to work in the agricultural sector. In this study, students were able to grow crops and participate in plowing the fields (2.6 and 2.5). Meanwhile, students are unable to provide fertilizer and mix fertilizer for farming (1.9 and 1.8). This is in line with what was found in research, namely that the material in agricultural education is limited to plowing rice fields, rice cultivation is not detailed down to the composition of fertilizer, so students are only able to get to the stage of tilling the land (with a plow and hoe). Meanwhile, the fertilization stage is quite complicated because you must apply the 4Ts (Right Type, Right Dosage, Right Time and Right Way) [10].

#### Student Perceptions of Work in the Agricultural Sector

The data obtained regarding the Perception of Agriculture in the students tend to give poor/negative answers to a number of statements given through the questionnaire instrument. This can be seen from the average research score which shows 2.17, which means that the students in this study are not good at work in the agricultural sector.

Table 11. Average Results of Students' Perception Indicators of Work in the Agricultural Sector (Y)

Indicator	Average Results	Information
Cognition	2,59	Good
Affection	1,97	Less interested
Psychomotor	2,35	Less fortunate
<b>Total Average</b>	<b>2,17</b>	<b>Not good</b>

Notes: 1-1.67: Poor; 1.68-2.35: Poor; 2.36 - 3.00: Good

Overall, it appears that the perception of students at SDIT towards work in the agricultural sector is categorized as poor (2.17). This is indicated by students' lack of interest in becoming farmers (1.97) and students' lack of ability to practice agriculture (2.35). However, students still have good knowledge related to agricultural practices, especially regarding the role of seeds, agricultural equipment, and stages of agricultural land processing.

#### The relationship between student characteristics, experiences of involvement in the agricultural sector by teachers and parents with student perceptions of work in the agricultural sector.

The independent variables in the research (X1) are age, gender, involvement in farming by parents, and involvement in farming by teachers. Meanwhile, the dependent variable in this research is students' perceptions of work in the agricultural sector.



Table 12. Correlation of Student Characteristics (X1) with Perceptions of Work in the Agricultural Sector (Y)

Individual Characteristics	Correlation	Cognition	Affection	Psychomotor
Age (X1.1)	Rs	0.281	<b>0.316**</b>	<b>0.418**</b>
Gender (X1.2)	X2	-0.106	0.007	0.005

Information:\*\* **Very Significant,**  
\***Significant**

#### Correlation between Age (X1.1) and Student Perceptions of Work in the Agricultural Sector (Y)

From Table 12, it can be seen that age is related to aspects of students' cognition in work in the agricultural sector, obtaining a relationship value of 0.281, which shows that there is a low and no real effect on the relationship between age and students' knowledge of work in the agricultural sector at SDIT. Age has a very significant relationship with aspects of affection with a positive relationship direction (**0.316\*\***) which means that the older the students are, the more likely they are to be interested in working in the agricultural sector. Apart from that, age also has a very significant positive relationship (**0.418\*\***) with students' perceptions of work in the agricultural sector. This means that the older a student becomes, the more likely they are to be able to practice some of the basic principles of farming as taught in school. A study conducted by Nugraha (2012) [5] shows that teenagers of older age tend to be interested in the agricultural sector because they can begin to see the potential of the agricultural sector. Apart from that, they are also starting to realize that agricultural work cannot be separated from its dirty and dirty aspects. mud. In this research, grade 6 students tend to be interested in having a positive perception of work in the agricultural sector because they have received some thematic material about agriculture such as agricultural products, agricultural resources, tools/equipment related to agriculture, in contrast to grades 4 and 5 who have not received much material about agriculture so that basic knowledge about agriculture is not as much as that of grade 6 students.

#### Correlation between Gender (X1.2) and Student's Perception Towards Employment in the Agricultural Sector (Y)

Gender is related to the cognitive aspect of work in the agricultural sector, obtaining a relationship value of -0.106, indicating that there is no real relationship because the correlation shows (-), indicating that gender will not influence young people's knowledge of work in the agricultural sector because work in the agricultural sector depends on impressions. and the level of knowledge they know between gender and students' knowledge of work in the agricultural sector at SDIT. Gender is correlated to the affection aspect towards work in the agricultural sector, obtaining a value of 0.007, indicating that there is no significant correlation between gender and students' affection or interest in the image of agriculture at school. Gender is related to students' psychomotor aspects of agriculture at school, getting a value

of 0.005, indicating that there is no real relationship between the two. Based on these results, it can be concluded that gender differences are not related to work in the agricultural sector.

#### Correlation between Student Farming Experience (X2) and Student's Perception Towards Employment in the Agricultural Sector (Y)

Variable (X2) is farming experience with teachers and parents. Variable (Y) is Student Perception of Work in the agricultural sector at SDIT which has three indicators including: cognition, affection, psychomotor.

Table 13. Correlation between students' experiences of being involved in agricultural activities and students' perceptions of work in the agricultural sector (Y)

Students' Experiences Involved in Farming	Statistics	Cognitive	Affection	Psychomotor
	RS	0,400 **	0,681 **	0,640 **

Primary Data Source, Processed 2022

It can be seen in table 13 that the relationship between students' farming experience and aspects of work cognition in the agricultural sector has a very significant positive correlation value (**0,400\*\***). This means that the higher the experience of students being involved in agriculture, the higher their knowledge about agriculture will be, meanwhile the experience of students' involvement in agriculture is also positively and very significantly related (**0.681\*\***), this condition illustrates that the higher the experience of student involvement in agricultural activities, the more positive the students' affection for work in the agricultural sector will be. This is because the higher the farming experience, the higher the students' knowledge regarding agricultural knowledge, because cognitive development is the basis for a child's ability to think. This is in accordance with the opinion of [11] that cognitive is a thinking process, namely an individual's ability to connect, assess and consider an incident or events, so this also has an influence in increasing knowledge about work in the agricultural sector. Students' farming experience is linked to aspects of students' affection for work in the agricultural sector, having a correlation value of 0.681\*\*. This value shows that there is a very real and very significant relationship between students' farming experience and students' interest in the agricultural sector. Experience in farming also has a very real positive relationship with aspects of students' affection in the agricultural sector, meaning that the higher the experience in farming, the more students in farming will like farming and have an interest in work in the agricultural sector. Students' farming experience is linked to students' psychomotor aspects of work in the agricultural sector, having a correlation value of 0.640\*\*. This value shows that there is a very real and very significant relationship between students' experience in farming. Experience in farming also has a very real positive

relationship with the psychomotor aspects of students in the agricultural sector, meaning that the more experience students have in farming, the more capable they are in farming. It can be concluded that the variable (X2), namely students' experience in farming, has a very real relationship with work in the agricultural sector (Y) in the eyes of students because it has a correlation value of 0.400\*\*. This is because, the more experience students have in farming, the more positive attitudes they will have towards farming.

#### IV. CONCLUSION

This research produced several conclusions, including: SDIT students have a poor perception of work in the agricultural sector, this is indicated by their low interest in farming and students' low ability to practice agriculture. Students have experience in gardening/farming with their parents. Together with parents, generally farming experience is gained when students do edu-agrotourism activities at tourist attractions or by teaching them to plant plants at home, either in the yard or in pots. Meanwhile, for farming experience at school, students receive thematic material related to the environment and also during visits to agrotourism locations. Students' age and farming experience are important factors related to students' perceptions of work in the agricultural sector. As a student gets older, the more they tend to have a positive perception of work in the agricultural sector, likewise, students who have experience farming with their parents and also with teachers at school have a tendency to have a positive perception of work in the agricultural sector

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