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THE KNOWLEDGE AND PERCEPTION OF AGRICULTURE AND AGRICULTURAL CAREERS AMONG URBAN YOUTHS: A CASE STUDY WITH THE STUDENTS OF THE TUNAPUNA GOVERNMENT PRIMARY SCHOOL

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ABSTRACT: Research has shown that the public's image of agriculture is a kaleidoscope of leftover attitudes and images of what agriculture was sixty years ago. Generally, the perception of society consists of limited ideas of the nature, scale, viability and economic importance of agriculture. Primarily, the continuous movement of agriculture misconceptions from one generation to another that often discourages individuals from pursuing agriculture as a career choice. In Trinidad and Tobago, it is speculated that parents discourage their children to pursue a career in agriculture because the ideology of a farmer for them does not signify success within the social stratification of society. In order for development to occur in the agriculture sector, young people need to fill the technical and non-technical roles in the sector. The most accepted perception among youths about a career in agriculture is that it is not as prestigious or lucrative as compared to professions in the medical, legal and energy fields. Generally youths that are interested in a career in agriculture either have a rich family history in agriculture or reside in a rural community. Rural youths have shown to be more knowledgeable about agriculture and agriculture careers compared to their urban counterparts because of the difference in the level of interaction with agriculture professionals. The students of urban schools in Trinidad and Tobago such as Tunapuna Government Primary School, still exhibit common misconceptions of a career in agriculture. A survey was conducted with the students and staff of the Tunapuna Government Primary School in order to assess their knowledge and perception of agriculture and agriculture careers. The responses were compared using analysis of variance to determine any differences in the knowledge and perception between the students and staff. The results showed significant differences between the responses of the students and staff of the Tunapuna Government Primary School. It was recommended that more emphasis should be placed on agriculture programmes in inner city schools to motivate the students towards pursuing a career in agriculture. This study was conducted as a preliminary study to assess whether agriculture programmes can be used as a social development tool for the students.

Keywords: Agriculture careers, knowledge, perception, Tunapuna, urban, youths.

Introduction

According to Coon and Cantrell (1985, 22-23), "most of society is 'agriculturally ignorant' and that the public's image of agriculture is a kaleidoscope of leftover attitudes and images of what agriculture was in the 40's, 50's and 60's." Based on the view point of Coon and Cantrell (1985, 22-23), a stagnated perception for agriculture generates a barrage of implications. Primarily, the continuous movement of agriculture

misconceptions from one generation to another discourages individuals from pursuing agriculture as a career choice (Super and Overstreet 1960). A common misconception is that a career in agriculture is only considered to be labor intensive farming. In Trinidad and Tobago youth involvement in agriculture has been constrained for two specific reasons. Firstly, parents discourage their children to pursue a career in agriculture because the ideology of a farmer for them does not signify success within the social stratification of society (Barath pers. comm.). The second situation occurs when farmers themselves are not observing their own worth and discouraging their children from pursuing a career in agriculture because of the belief that their children deserve better than toiling on the farm lands (Rawlins pers. comm.). These common misconceptions often give a sense of belittlement when young people think about pursuing a career in agriculture.

The most accepted perception among youths about a career in agriculture is that it is not as prestigious or lucrative as compared to professions in the medical, legal and energy fields (White, Stewart, and Lindhart 1991, 33). Young individuals have to overcome the barriers concerning the career status for them to be properly motivated in a career choice (Super and Bohn 1970). Generally youths that are interested in a career in agriculture either have a rich family history in agriculture or reside in a rural community. Rural youths have shown to be more knowledgeable about agriculture compared to their urban counterparts because of the difference in the level of interaction with agriculture professionals (Frick et al. 1995, 1-3). Conversely urban youths still maintain the common misconceptions about a career in agriculture because of the limited level of interaction with agricultural professionals as highlighted by Frick et al. (1995, 1-3). Furthermore, access to relevant information pertaining to a career in agriculture is constricted by a combination of the mass media sources for which urban youths depend on to ascertain information and generally the lack of interest by urban youths to seek such information on their own accord.

Agriculture has encountered declining involvement and enrollment at all educational levels (White, Stewart and Lindhart 1991, 30-33). For any purposed movement towards agriculture development, more emphasis should be placed on linking and recruiting students especially at the primary school level (Super and Overstreet 1960). The Ministry of Education for Trinidad and Tobago has considered the re – introduction of Agricultural Sciences as a part of the primary school curriculum (Barath pers. comm.). These measures are incremental changes towards infusing the younger generation into the agriculture field but, the proper motivation and an enabling environment is needed to support the appropriate agriculture succession strategies (Rawlins pers.comm.).

Research conducted by Frick (1991), has shown that students and staff in urban based schools tend to display more misconceptions about a career in agriculture compared to the rural based schools. Therefore, urban schools in Trinidad and Tobago such as Tunapuna Government Primary School will still exhibit common misconceptions of a career in agriculture by the students and staff. The Tunapuna Government Primary Schools will have these perceptions because the students and staff of the school mostly reside in the surrounding urban environments. In addition to these observations, little

information is available concerning the perceptions of an agricultural career by the students and staff of the Tunapuna Government Primary School. It is expected that the students and staff of the school either do not seek the pertinent information concerning a viable career in agriculture or they are not exposed to such information given the communication mechanisms for which they access information. Research has shown that information affects knowledge level and knowledge affects perception for agriculture (Frick et al. 1995, 1-3). As a result, due to the limited access and lack of interest to pertinent information on agriculture, the overall knowledge about the importance of agriculture of the students and staff of the Tunapuna Government Primary School will cause them to have a negative perception towards a career in agriculture.

The premise presented by Frick et al. (1995, 1-3) provides the basis for this project as the assumptions made about urban youths and their perception of a career in agriculture is determined for a school located in an urban setting. Therefore, this study presents a case study for the Tunapuna Government Primary School. Highlighting the perception of an urban based school given their constraints to information about agriculture and agricultural careers, is essential because these students will be the ones to fill the roles of technically skilled labourers and reshape the ideologies of the present agriculture systems. The assessment will be conducted to both the students and staff despite the emphasis on youth perception. The reason for this is because the staff has some measure of influence over the type of information that the students receive. Therefore, if the staff has a positive perception about agriculture careers then they can pass this positive attitude on to the students.

The Tunapuna Government Primary School is situated east of St. Augustine and west of Arouca, and can be accessed by the Eastern Main Road, El Dorado and Pasea Village (formerly Streatham Lodge). It is located exactly at # 1 Pasea Main Road, Tunapuna, St. George East; it is next to the Tunapuna Police Station, adjacent to the Tunapuna Fire Service Station and approximately half a kilometer from the Tunapuna Municipal Market (Wikimapia 2012). The Tunapuna Government Primary School was established in the year 1879 [Ministry of Education (MOE) 2012]. It was rebuilt in 1898 after it was destroyed by fire and again in 2011 as a means of refurbishing a dilapidated school; it has 133 years of rich history behind it. The school holds a capacity of 240 students and approximately 20 members of staff. The Tunapuna Government Primary School is a non-denominational school; it contains a variety of religious sects including Roman Catholics, Hindus, Muslims and Seven Day Adventists etc. The school has a combination of various ethnicities; East Indians, Africans, Mixed races; cultures and domestic backgrounds (Fortune, pers. comm.). These factors add to the unique but fairly common culture of students at an urbanely based government run institution in Trinidad and Tobago.

The Ministry of Education Student Support Services indicated that the Tunapuna Government Primary School has many students that come from broken homes and have domestic issues. These issues interfere with their behavior and performance at school. Some of the issues highlighted were verbal, physical and sexual abuse;

abandonment, and neglect. The students with their everyday life concerns create challenges for the teachers in the school who try to convert the behaviors and perceptions of students (Boynes, pers. comm.).

This school was chosen primarily for the study for two reasons. Firstly, agricultural science is a part of the school's curriculum, and due to lack of training in the subject field by teachers at the institution, it is not taught. Secondly, the school was to be an avenue for promoting agriculture through the 4H movement, however the venture did not go beyond its' blueprint. The idea of introducing the 4H movement to the students and staff of the Tunapuna Government Primary School was to help transform the behavior and performance of the students in the school thereby creating a better individual and further more a better school environment (Fortune, pers. comm.).

METHODOLOGY

The study outlined was developed to determine the perception towards agriculture careers by students and staff of an urban school. The study was conducted at the Tunapuna Government Primary School since the school was identified as a suitable location for conducting the research. The study primarily used qualitative data. In ascertaining the required qualitative data, a questionnaire using a Likert scale instrument was adopted.

The study required primary data only. The primary data was obtained using questionnaires designed for both the students and staff of the Tunapuna Government Primary School. In order to conduct the study, a total of 40 students and 21 staff members were interviewed on the 14th and 15th of November 2012. A total of 61 surveys were collected from a possible population size of 240. The sample represented approximately 30% of the entire population at the school.

The sampling approach used in this study comprised a combination of purposive and diversity sampling. The intention was to study the Tunapuna Government Primary School as the particular group of interest as well as to specifically highlight a comparison between subgroups and potential conflicts among variables. A stratified random sample was conducted with the students from Standard 2 to Standard 5. These classes were selected because the students were age appropriate to objectively complete the questionnaire. Ten students consisting of five boys and five girls were randomly selected from each standard and were taken to a private classroom to conduct the survey in order to avoid disruption from their fellow classmates. The entire staff population was surveyed since it was feasible to conduct it given the small staff population.

The Likert Scale used allowed respondents to indicate their level of agreement with statements expressed as agreeable or disagreeable that reflected their knowledge and perception towards agriculture and agriculture careers. The response to each questionnaire item that was not numerical in nature was represented by numbers (1 to 4) on the Likert Scale, ranging from strongly agree to strongly disagree respectively. In analyzing the data compiled, the independent and paired t – test, and regression

analysis were used. These analytical methods were adopted to make comparisons between different derived averages. Such as, a comparison of means between the students and staff knowledge and perception findings; and a comparison between the types of information accessed by the sample and the knowledge and perception findings of the sample. The regression analysis was also used to compliment the paired t – test by in determining the direction of the qualitative relationship between the test variables.

Results

The study wanted to determine the relationship between the knowledge and understanding of agriculture and the importance of agriculture to development and food security and the perceptions towards a career in agriculture among the students and staff of the Tunapuna Government Primary School. An analysis on the basic knowledge of agricultural importance to food security and national development was conducted using the Independent T- test. This was done to determine whether there was difference in the basic knowledge of agriculture importance between the students and staff (Table 1). It was proposed that there will be a significant difference of the knowledge on the importance of agriculture to food security and national development between the students and staff of the Tunapuna Government Primary School.

Table 1. Independent T-test on Knowledge of Agriculture between Students and Staff

Variables	N	MEAN	F	P (Sig)
KNOWLEDGE				
Importance to development	N	MEAN	F	P (Sig)
Staff	21	3.475	6.343	.015
Students	40	3.761		
Importance to food security	N	MEAN	F	P (Sig)
Staff	21	3.428	8.555	.005
Students	40	3.775		
Led to current development	N	MEAN	F	P (Sig)
Staff	21	3.048	7.861	.007
Students	40	2.625		

An analysis on the perceptions of agricultural careers was also conducted using the Independent T- test. This was done to determine whether there was difference in the perceptions of agricultural careers between the students and staff (Table 2). It was proposed that there is significant difference in the perception of a career in agriculture between the students and staff of Tunapuna Government Primary School.

Table 2. Independent T- test on Perceptions of Agricultural Careers between Students and Staff.

Variables	<i>N</i>	<i>MEAN</i>	<i>MEAN DIFF</i>	<i>CORR</i>
Overall Knowledge	61	12.869	2.573	.505
Overall Perception	61	10.295		
<i>REGRESSION RELATIONSHIP</i>				
Variables	<i>N</i>	<i>Constant</i>	<i>Coefficient</i>	<i>P (Sig)</i>
Dependent – Perception	61	4.190	.474	.000
Independent – Knowledge				

Table 3. Paired T-test and Regression relationship between the Knowledge and Perception of the Students and Staff.

Variables	N	MEAN	F	P (Sig)
PERCEPTION				
Interest in agricultural careers	N	MEAN	F	P (Sig)
Staff	21	2.333	4.804	.032
Students	40	2.300		
Only farming in agriculture	N	MEAN	F	P (Sig)
Staff	21	2.000	4.391	.040
Students	40	1.750		
Agricultural career is prestigious	N	MEAN	F	P (Sig)
Staff	21	2.857	4.982	.029
Students	40	2.550		

An analysis on the relationship between the basic knowledge on agriculture importance and the perceptions of agricultural careers was conducted using the Paired T-test. A Regression analysis was also conducted, where perception was dependent on knowledge; in order to determine the positive or negative relationship between the two variables (Table 3). It was proposed that there is a significant difference between the knowledge of the students and staff of the Tunapuna Government Primary School on the importance of agriculture to food security and national development and their perception towards a career in agriculture.

Discussion

The knowledge of the students and staff of the Tunapuna Government Primary School on the importance of agriculture to national development and food security was used to emphasize that the participants understood that agriculture is important to the overall enhancement of Trinidad and Tobago. The knowledge of the sample was assessed using three parameters. Knowledge was assessed based on the participants' level of agreement to statements concerning the contribution agriculture makes to national development, food security and the historical significance of agriculture in positioning

the economy of Trinidad and Tobago. The knowledge assessment was conducted to determine whether there was a difference between the students and staff. The reason for identifying whether there was any significant difference between the students and staff was to show that there is a disparity in knowledge on the importance of agriculture that is not being transmitted especially from teachers to students.

Analyzing the knowledge of the students and staff of the sample population towards the three knowledge parameters, the data showed that there were differences between the students and staff at 5% significance. When it came to the level of agreement that agriculture is important to national development and the historical significance of agriculture to current economic development in Trinidad and Tobago the staff showed a higher percentage of agreement compared to the students. When it came to the level of agreement that agriculture is important to food security in Trinidad and Tobago, the students showed a higher percentage of agreement compared to the staff.

The perception of the students and staff of the Tunapuna Government Primary School on agriculture careers was determined in order to understand the factors that hamper the pursuit of agriculture careers in a conventional urban based primary school Trinidad and Tobago. The perception of an agriculture career was assessed using three parameters of the overall hypothesis. Perception was assessed based on the participants' level of agreement to statements concerning their expressed interest in pursuing an agriculture career, their view point that agriculture is not only about farming and that agriculture is a prestigious career. The perception assessment was conducted to determine whether there was a difference between the students and staff. The reason for identifying whether there was any significant difference between the students and staff was to show that there is a disparity in the perception of an agriculture career and the perceptions are not passed on from the teachers to students.

Analyzing the perception of the students and staff of the sample population towards the three perception parameters, the data showed that there were differences between the students and staff at 5% significance. When it came to the level of agreement in pursuing a career in agriculture, the viewpoint that agriculture is more than farming and that a career in agriculture is prestigious, the staff showed a higher percentage of agreement compared to the students.

The intent of this section was to determine if there was any significant difference between the overall knowledge content and the overall perception obtained in the surveys conducted. Based on a mean difference of 2.573, it can be noted that there is difference between the overall knowledge and the overall perception. Despite the differences in means between the overall knowledge and the overall perception of the sample population, further analysis revealed a relationship between the two variables. A regression analysis was conducted where perception is dependent on knowledge. With a 5% significance level, the regression analysis showed a positive relationship between knowledge and perception. This is a clear indication that knowledge can positively affect perception.

Conclusion

The conclusion is that practical implications for agriculture would arise and researchers should further their study in the issue of agricultural literacy. This research provides indications of a call for further education of the general public regarding the agricultural industry which plays a major role in sustaining human life. From the review of the literature and discussion with personnel in the field, it is apparent that the study conducted compliments the literature review. The review of literature highlighted that the participants were very keen on the importance of agriculture as an industry and they believed that the industry should be retained. However, they had limited ideas of the agricultural nature, scale, viability and regional economic importance.

The general objective of the study was met with significant results clearly supporting the stated objective and referenced literature. Based on the literature and the corresponding study results, there is a correlation between the knowledge on the importance of agriculture to development and food security and the perception of a career in agriculture among the study population. The results generated from the survey indicated that the staff had a higher awareness of the importance of agriculture to national development. The students showed higher awareness on the importance of agriculture to food security. The results also showed that the students' perception of agriculture as a career is lower than that of the staff. In conclusion, there is a disparity in the knowledge and perception about agriculture and agriculture careers between the students and staff at the Tunapuna Government Primary School.

The results generated from the study indicated that there is a relationship between knowledge and perception. In conclusion, the 5% significance level of the relationship between the knowledge obtained and the perception attained by students and staff at the Tunapuna Government Primary School was relevant. The differences in knowledge and perception between the student and staff shows that the information is not being shared or transmitted effectively within the school population. Despite the differences in knowledge and perception between the student and staff, a positive relationship between knowledge and perception exists for the school population. Therefore, with increased information on agriculture, there will be an increase in the overall knowledge and subsequent positive increase in the perception of the school population towards agriculture and agriculture careers.

Recommendation

Understanding that knowledge affects perception based on the references and results is critical in developing positive perceptions towards agriculture in the Tunapuna Government Primary School. Based on the results generated in the information dissemination and knowledge sections, it can be stated that agricultural professionals need to take a more proactive role in ensuring that agriculture information is disseminated effectively. Tunapuna Government Primary School should facilitate more interactions between agricultural professionals and the students and staff. This will enhance the overall knowledge on agricultural issues and positively develop the perception of agriculture and agricultural careers among the population of the school.

The students' indicated that they received their information inclusive of agricultural issues, primarily from their teachers. This suggests that the teachers of the Tunapuna Government Primary School play a crucial role in disseminating information on agriculture and agricultural careers to the students. As such, the teachers are incremental in helping to shape the perception of their students based on the information they provide. Since the school has agriculture science as a part of the school curriculum then the teachers need additional training to develop their overall knowledge on agriculture issues. Through additional training, the teachers will be equipped sufficiently to effectively enhance the knowledge of the students on agriculture issues.

Finally the overall knowledge and perceptions towards agriculture among the entire school population has to be developed. The best approach identified is the adoption of practical learning. Developing practical learning programmes in the school such as the 4H club will complement the formal and informal learning experiences for the entire school. The 4H programme can stimulate interest in agriculture among the school population while enhancing the knowledge and perceptions of agriculture. A 4H programme will also allow an avenue for the Tunapuna Government Primary School to network with several other schools and groups that share a common interest in learning the importance of agriculture.

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