

Essential Leadership Competencies Needed in Agricultural Occupations as Identified by Agricultural Leaders in District Hyderabad, Sindh

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Abstract: The study sought to describe the essential leadership skills needed in the profession of agriculture in Hyderabad District. The study employed survey method with 150 randomly drawn sample. A questionnaire was developed heavily drawn from the research of Hampson, *et al.*, (1977). The results indicated that agricultural leaders need continuous educational programs for the development of their leadership skills. These programs can be carried out by educational institutes such as Sindh Agriculture University, Tandojam.

Key Words: Leadership Competencies, Organizational Leadership, Leadership Development

Introduction

In today's leading organizations, leadership is one of the highly debated subjects. Leadership becomes an engaging area for most organizations. Scholars in various intellectual fields, such as agricultural extension, sociology and anthropology, are involved in building new leadership theories with implications for organizations. Leadership is present everywhere. It is present in every social and political system. "There probably has never been a society, country, or organization that did not have a leader, if there has, it probably did not survive for long" (Locke, 1991, p. 1). Leadership becomes an integral part of a democratic society where people themselves are the decision-makers (Memon, 1993).

With the growing interest in leadership, leadership and leadership development become a major focus of study and research. Many books and research publications have been written and a wide range of literature is available on leadership. No doubt the vast amount of literature had enabled many educators and researchers to develop and critically analyze leadership theories. This knowledge base enables researchers and educators to conduct leadership programs and seminars aimed at development of leaders. "Leadership has emerged as a recognized area of study and it continues to be a major focus in our rapidly changing societies" (Seevers, Graham, Gamon, and Conklin, 1997, p. 64).

Public affairs education and leadership development programs increase problem-solving skills as well as involvement in policy making positions (Horner, 1984). The development of dynamic, active leadership and encouragement to increase community members' involvement in community activities have long been perceived as the key to community sustainability. Effective leadership at all levels of society and in all of our organizations is essential for coping with the growing social and economic problems confronting the world. Learning to cope with these problems is not a luxury but a necessity (Yukl, 1998).

In our rural areas, leadership is being provided through different organizations such as Agricultural Extension provides the farmers with the tool to cope

the challenge faced in their own community. Department of Agricultural Engineering is involved in providing farm machinery and water management practices. At the same time, Agricultural scientists at Agricultural Research Institutes/Centers are working day and night to introduce farmers with the latest agricultural technologies most suitable to their agro-climatic conditions. However, little is known about the leadership skills possessed and needed by these Agricultural Scientists/Researchers, Agricultural Extension Workers, and Agricultural Engineers in their fields. Viewing this situation, the research focused on to identify the leadership qualities possessed and needed by these leaders so as to enable the concerned departments to introduce new leadership programs at the bottom level.

Purpose and Objectives: The primary purpose of this study was to determine the leadership competencies needed by agricultural leaders in Hyderabad District. Following objectives were set forth to achieve this purpose:

1. Determine leadership competencies needed and possessed by agricultural leaders,
2. Determine the leadership competencies that are not performed by agricultural leaders, and
3. Compare the perceptions of agricultural leaders when grouped by their selected demographic characteristics.

Materials and Methods

This research featured a descriptive survey design. According to Leedy (1989), descriptive survey is the method of research that looks with intense accuracy at phenomena of the moment and then describes precisely what researcher sees. He called descriptive survey as normative survey and explained that this method is based on the assumption that whatever is observed at any time is normal and under same conditions could be observed again in the future. The target population of this survey was consisted of all Directors, Deputy Directors, Assistant Directors, and Agricultural Officers of Agricultural Extension Department; All the Directors, Agricultural Engineers and Assistant Agricultural Engineers of Agricultural

Engineering Department; and all the Directors, Deputy Directors, Sectional Heads of Agricultural Research Institutes. Because there were three groups; Agricultural Extension, Agricultural Engineering, and Agricultural Research Institutes, the sample was divided into three homogenous groups and then a simple random sampling was done to select the sample from these three groups. This sampling is called stratified sampling (McMillan, 1999). Because the groups were not equal in size, disproportional stratified sampling was performed. According to McMillan (1999), when groups are not equal in size, disproportional stratified sampling ensures that a sufficient number was selected from each group. 50 respondents were randomly selected from each organization that shaped a sample of 150. A detailed questionnaire was developed using the available literature, experience of the researchers in the field and discussions with the worthy faculty members. The questionnaire utilized by Hampson, et al., (1977) provided the basis for the identification of leadership competencies included in the present study. First part of the questionnaire consisted of the questions regarding demographic information of the respondents. Second part of the questionnaire consisted of 51 total leadership competencies and were grouped into six major areas. These areas were;

1. Develop good work habits;
2. Leading individual and groups;
3. Participation in committees and groups;
4. Participating in professional and business official organizations;
5. Developing communication skills; and
6. Developing personal skills.

A 1–5 Likert type scale was used to measure the responses of the respondents regarding the level of importance of each leadership competency. On the scale, 1 stands for Very High, 2 for High, 3 for moderate, 4 for Low and 5 for Very Low. Respondents were also asked if they are performing each competency. Data were analyzed using SPSS/PC statistical package.

Results and Discussion

Information about age, educational qualification, and work experience were inquired during the study. Results are depicted in Table 1.

Table 1 indicates that majority (47.30%) of the respondents belonged to the age group of 41 and above years of age. Majority (65.33%) respondents had B.E./B.Sc level of education. 51.33% respondents had 11-15 years of work experience in their respective fields.

Identification of leadership competencies needed by agricultural leaders was the main focus of the present study. Data pertaining to this objective is summarized in Table 2. 51 leadership competencies were identified and divided into the six major categories; Develop good work habits, Leading individuals and groups, Participation in committees and groups, Participation in professional and business official organization, Developing communication skills, and Developing personal skills.

Table 2 indicates following five leadership competencies were perceived by the respondents as highly important:

- Follow a democratic procedure (1.76 mean score)
 - Maintain a positive attitude (1.88 mean score)
 - Accept and carryout responsibilities (1.92 mean score)
 - Communicate clearly in written (2.00 mean score)
 - Establish and post work (2.11 mean score)
- The five lowest perceived leadership competencies were:
- Conduct a committee (3.74 mean score)
 - Write letters (3.81 mean score)
 - Select members for the committee (3.84 mean score)
 - Organize and present TV programs (3.86 mean score)
 - Complete a personal inventory of strength and weakness (4.12 mean score)

Respondents were also asked if they are performing these leadership competencies.

Responses are presented in Table-3.

Table 1: Age, Educational Qualification, and Work Experience of the Respondents

Characteristics	Category	Number	Percentage
Age	21-30 years	30	20.00
	31-40 years	49	32.70
	41 and above	71	47.30
	Total	150	100.00
Educational Qualification	B.E./B.Sc	98	65.33
	M.E./M.Sc	45	30.00
	B.A/M.A	07	04.67
	Total	150	100.00
Work Experience	1- 10 years	55	36.67
	11-15 years	77	51.33
	16 and above	18	12.00
	Total	150	100.00

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Table 2: Perception of Agricultural Leaders on Leadership Competencies

S. No	Items	Mean	Rank
Develop Good Work Habits			
1.	Establish and post work	2.11	05
2.	Accept and carryout responsibilities	1.92	03
3.	Department initiative in completing work	2.44	09
4.	Follow business remarks and policies	2.84	16
Leading Individuals and Groups			
5.	Follow democratic procedure	1.76	01
6.	Define group objectives and goals	2.47	10
7.	Act as arbitrator/mediator in group conflicts	3.29	32
8.	Identify sources of interpersonal conflicts	3.34	36
9.	Encourage group participation	2.72	12
10.	Involve others in group decisions	2.29	07
11.	Develop new programs and activities when needed	3.25	31
12.	Collect necessary information	2.48	37
13.	Evaluate information	3.46	37
14.	Develop meeting agendas	2.87	17
15.	Demonstrate good judgments	2.94	18
16.	Prompt group cooperation	3.47	38
17.	Assume responsibility for completion of group activity	3.33	34
18.	Inform individuals of their roles and responsibilities	3.00	21
19.	Identify various types of leadership	3.50	41
20.	Evaluate accomplishments of individuals and group objectives	3.14	27
Participation in Committees and groups			
21.	Serve as committee chairperson	3.17	29
22.	Conduct a committee	3.74	47
23.	Select members for the committee	3.84	49
24.	Evaluate the accomplishments of the committee	3.48	39
25.	Identify committee objectives	2.72	12
26.	Delegate responsibility to other committee members	2.29	07
27.	Maintain satisfactory group	3.25	31
28.	Recognize individual committee members needs	2.48	37
29.	Use proper parliamentary procedure	3.46	37
Participating in Professional and Business Official Organization			
30.	Participate as a member of an organization at the local/provincial/national level	2.87	17
31.	Assume responsibility for the operation of the organization	2.94	18
32.	Attend meetings regularly	3.47	38
33.	Identify the principals and purposes of the organization	2.96	20
Developing Communication Skills			
34.	Present information to group	2.16	06
35.	Communicate clearly in written roles and responsibilities	2.00	04
36.	Listen to others	3.65	45
37.	Function as a spoke person for a group	3.65	46
38.	Participate in conversion discussion	3.22	30
39.	Write a news article	2.35	08
40.	Write letters	3.81	48
41.	Organize and present Television programs	4.12	51
Developing Personal Skills			
42.	Complete a personal inventory of strength and weakness	3.86	50
43.	Maintain positive attitudes	1.88	02
44.	Develop initiative	3.02	24
45.	Manage use of time	2.72	13
46.	Demonstrate sincerity	3.52	42
47.	Demonstrate noise	3.12	26
48.	Demonstrate confidence	2.94	19
49.	Exhibit respectiveness to suggestions	3.30	33
50.	Demonstrate ability to work with others	2.78	14
51.	Demonstrate patience suggestions	3.07	25

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Table3: Perceptions of Leadership Competencies Performed by Agricultural Leaders

S.No	Items	Yes No.	%	No No.	%
Develop Good Work Habits					
1.	Establish and post work	126	84	24	16
2.	Accept and carryout responsibilities	127	84.6	23	15.4
3.	Department initiative in completing work	124	82.6	26	17.4
4.	Follow business remarks and policies	125	83.3	25	16.7
Leading Individuals and Groups					
5.	Follow democratic procedure	129	86	21	14
6.	Define group objectives and goals	127	84.6	23	15.4
7.	Act as arbitrator/mediator in group conflicts	123	82	27	18
8.	Identify sources of interpersonal conflicts	121	80.6	29	19.4
9.	Encourage group participation	122	81.3	28	18.7
10.	Involve others in group decisions	124	82.6	26	17.4
11.	Develop new programs and activities when needed	122	81.3	28	18.7
12.	Collect necessary information	127	84.6	23	15.4
13.	Evaluate information	124	82.6	26	17.4
14.	Develop meeting agendas	124	82.6	26	17.4
15.	Demonstrate good judgments	123	82	27	18
16.	Prompt group cooperation	126	84	24	16
17.	Assume responsibility for completion of group activity	125	83.3	25	16.7
18.	Inform individuals of their roles and responsibilities	121	80.6	29	19.4
19.	Identify various types of leadership	122	81.3	28	18.7
20.	Evaluate accomplishments of individuals and group objectives	121	80.6	29	19.4
Participation in Committees and groups					
21.	Serve as committee chairperson	125	83.3	25	16.7
22.	Conduct a committee	123	82	27	18
23.	Select members for the committee	122	81.3	28	18.7
24.	Evaluate the accomplishments of the committee	124	82.6	26	17.4
25.	Identify committee objectives	127	84.6	23	15.4
26.	Delegate responsibility to other committee members	127	84.6	23	15.6
27.	Maintain satisfactory group	125	83.3	25	16.7
28.	Recognize individual committee members needs	124	82.6	26	17.4
29.	Use proper parliamentary procedure	123	82	27	18
Participating in Professional and Business Official Organization					
30.	Participate as a member of an organization at the local/provincial/national level	123	82	27	18
31.	Assume responsibility for the operation of the organization	124	82.6	26	17.4
32.	Attend meetings regularly	119	79.3	31	20.7
33.	Identify the principals and purposes of the organization	127	84.6	23	15.4
Developing Communication Skills					
34.	Present information to group	128	85.3	22	14.7
35.	Communicate clearly in written roles and responsibilities	129	86	21	14
36.	Listen to others	128	85.3	22	14.7
37.	Function as a spoke person for a group	123	82	27	18
38.	Participate in conversion discussion	121	80.6	29	19.4
39.	Write a news article	120	80	30	20
40.	Write letters	119	79.3	31	20.7
41.	Organize and present Television programs	117	78	33	22
Developing Personal Skills					
42.	Complete a personal inventory of strength and weakness	116	77.3	34	22.7
43.	Maintain positive attitudes	127	84.6	23	15.4
44.	Develop initiative	123	82	27	18
45.	Manage use of time	127	84.6	23	15.4
46.	Demonstrate sincerity	121	80.6	29	19.4
47.	Demonstrate noise	123	82	27	18
48.	Demonstrate confidence	124	82.6	26	17.4
49.	Exhibit respectiveness to suggestions	124	82.6	26	17.4
50.	Demonstrate ability to work with others	121	80.6	29	19.4
51.	Demonstrate patience suggestions	117	78	33	22

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Table 4: Test for Significant Difference in Leadership Competencies when Grouped by their Age

Category	G1 N=30	G2 N=49	G3 N=71	Mean	F. Ratio
• Developing Good Work Habits	2.75a	2.15b	1.36c	2.09	346.10**
• Leading Individuals and Groups	2.12b	1.65c	2.64a	2.14	107.88**
• Participation in Committee and Groups	3.51a	2.91b	1.36c	2.59	784.57**
• Participation in Professional and Business Official Organization	4.00a	2.87b	1.97c	2.95	1021.57**
• Developing Communication Skills	3.51a	2.20	3.52a	3.08	330.51**
• Developing Personal Skills	2.64b	2.12c	3.14a	2.63	294.22**

Group 1= Agricultural Leaders of 30 or Less Years of Age, Group 2= Agricultural Leaders of 31 to 40 Years of Age,
Group 3= Agricultural Leaders of 41 or above Years of Age

Table 5: Test for Significant Difference in Leadership Competencies when Grouped by their Educational Qualification

Category	G1 N=98	G2 N=45	G3 N=07	Mean	F. Ratio
• Developing Good Work Habits	2.81b	1.36c	3.80a	2.66	285.99**
• Leading Individuals and Groups	2.81b	2.15c	3.74a	2.90	289.55**
• Participation in Committee and Groups	1.36c	2.91b	3.56a	2.59	784.57**
• Participation in Professional and Business Official Organization	3.14b	2.15c	4.12a	3.14	1008.55**
• Developing Communication Skills	3.51a	2.20b	3.52a	3.08	330.51**
• Developing Personal Skills	4.51a	2.54c	4.15b	3.73	492.68**

Group 1= Agricultural Leaders having Bachelors in Science, Group 2= Agricultural Leaders having Masters in Science,
Group 3= Agricultural Leaders having Bachelors/Masters in Arts

Table 6: Test for Significant Difference in Leadership Competencies when Grouped by their Work Experience

Category	G1 N=55	G2 N=95	Mean	F. Ratio
• Developing Good Work Habits	2.70a	2.14b	2.42	21.83**
• Leading Individuals and Groups	3.62a	2.19b	2.91	1492.8**
• Participation in Committee and Groups	4.71c	2.78b	3.75	242.29**
• Participation in Professional and Business Official Organization	3.27a	2.28b	2.78	183.99**
• Developing Communication Skills	3.86a	2.59b	3.22	60.42**
• Developing Personal Skills	4.71a	2.78b	3.75	242.29**

Group 1= Ten and Less years of Experience, Group 2= Eleven and Above Years of Experience

Table 7: Test for Significant Difference in Leadership Competencies when Grouped by their Organization

Category	G1 N=50	G2 N=50	G3 N=50	Mean	F. Ratio
• Developing Good Work Habits	3.70a	2.35b	1.36c	2.47	793.12**
• Leading Individuals and Groups	3.65a	2.89b	2.89b	3.14	90.69**
• Participation in Committee and Groups	4.71a	2.78b	1.93c	3.75	242.29**
• Participation in Professional and Business Official Organization	3.96a	3.14b	2.42c	3.17	525.40**
• Developing Communication Skills	3.01a	2.29b	1.19c	2.16	81.19**
• Developing Personal Skills	4.71a	4.12b	2.69c	3.84	149.87**

Group 1= Agricultural Research Institutes, Group 2= Agricultural Extension, and Group 3= Agricultural Engineering Workshop

Table 3 indicates the following three competencies were performed by the majority of the respondents:

- Follow democratic procedure (86%)
- Communicate clearly in written (86%)
- Present information to group (85.3)

To compare the perceptions of the Agricultural Leaders when grouped by demographic characteristics was the second objective of this study. To achieve this objective, null hypothesis were tested.

Null Hypothesis 1: There is no significant difference between the perceptions of Agricultural Leaders when grouped by their age. In testing this hypothesis, leaders were grouped into three groups: group 1 was consisted of those who were 30 years of age or less, group two consisted of those who belonged to the age group of 31 years to 40 years, and group three consisted of leaders who belonged to the age group of 41 and above years of age. DMRT was performed to know the significant difference among the groups. Results are given in Table 4. The one-way ANOVA was used to determine the significant differences existed in the level of importance when agricultural leaders were grouped by their age. Table 4 reports that there is a highly significant difference between the age groups on leadership competencies. Therefore, null hypothesis was rejected and it was concluded that there is a statistical difference present between the leaders when grouped into the different age categories.

Null Hypothesis 2: To test the null hypothesis regarding the perception of leadership competencies when grouped by their educational qualification, leaders were grouped into three categories; leaders having Master of Science, leaders having Bachelors of Science and leaders having Bachelors/Masters in Arts. One way ANOVA and DMRT was performed. Results are presented in Table 5.

Table 5 depicts that there was a high significant difference between the leaders when leaders were grouped by their educational qualification. Therefore, null hypothesis was rejected and it was concluded that there is a statistical difference present between the groups.

Null Hypothesis 3: Another null hypothesis was that there is no significant difference between the leaders when grouped by their work experience. The results are presented in Table 6.

Table 6 shows that there was a significant difference between the groups.

F-Ratio shows a statistical difference at 0.05. Therefore, the null hypothesis was rejected and it was concluded that there exists a difference between the groups.

Null Hypothesis 4: The last null hypothesis was to determine the significant difference between leaders when grouped by their affiliated organization. Table 7 presents the results. Results show a significant difference between the groups.

Conclusion

From the aforesaid results, it is concluded that Agricultural Leaders in District Hyderabad are still inexperienced in performing leadership skills at their job place. The five highly important competencies as perceived by the respondents were follow democratic procedure, maintain a positive attitude, accept and carryout responsibilities, communicate clearly in written, and establish and post work. The five least perceived leadership competencies were conduct a committee, write letters, select members for the committee, organize and present TV programs, and complete a personal inventory of strength and weakness. The three leadership competencies which were performed by the majority of leaders were follow democratic procedure, communicate clearly in written, and present information to group. In addition, there exists significant difference between leaders on leadership competencies when leader were grouped by their demographic characteristics.

Based on these results and conclusions, it is recommended that continuous educational programs and training for the leaders will be carried out so that these leaders will get up to date and skilled in their profession. Further research of this nature will be carried out in other districts of Sindh Province so as to compare and validate the findings of this study.

References

- Hampson, M. N., L. H. Newcomb and J. D. McCracken, 1977. Essential leadership and personal development competencies needed in agricultural occupations as identified by agricultural leaders in Ohio. Columbus, Ohio: Dep. of Agricultural Education. The Ohio State Univ.
- Leedy, P. D., 1989. Practical research: planning and design. 4th Edition. MacMillan Publishing Company, London.
- Locke, E. A., 1991. The essence of leadership: The four keys to leading successfully. Lexington Books.
- Horner, J. T., 1984. Developing effective agricultural leaders. J. of Extension: 22, 15-18.
- McMillan, J. H., 1999. Educational Research: Fundamental for the consumers. 3rd Edition. HarperCollins College Publishers: USA.
- Memon, R. A., 1993. Leadership development in extension. In E. Bashir (Ed.) Extension Methods. National Book Foundation: Islamabad.
- Seevers, B., D. Graham; J. Gamon and N. Conklin, 1997. Education through Cooperative Extension. Delmar Publisher: USA.
- Yukl, G. A., 1998. Leadership in Organization. 4th Edition. Prentice-Hall, Inc. USA.