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Collective Leadership Competencies among Agricultural Researchers in Selected Agricultural Institutes in Oyo State, Nigeria

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Abstract

The study assessed the collective leadership competencies of agricultural researchers in selected agricultural institutes in Oyo state, Nigeria. A multistage sampling procedure was used to select 177 agricultural researchers for the study. Data were analyzed using, percentages, weighted

mean scores, and logit regression analysis. Results showed that 28.4% of the employee daily create and maintain clarity in their professional vision. Also, the result on the compass dimension of employees' engagement showed that 47.7% invested their time in relationship building. In addition, for the compass dimension on innovation, 63.6% of the employees stated that they nurture creativity and stay open to new ideas. For collective intelligence, 38.0% of the employees revealed daily established structured dialogues that harvest different perspectives. There was a significant relationship between future possibilities ($r=0.03^*$), innovation($r=0.001^*$), and collective leadership competencies. The agricultural researchers' collective leadership competencies are very low. Sensitization workshops on collective leadership be organized by relevant institutions for agricultural researchers.

Introduction

Over the years, leadership is seen as a relationship between two social individuals, that is, the leader and the followers. However, the need to re-conceptualize leadership in a pluralized approach from the top-down to the collaborative approach in the workplace is apt. Recent theories claim that leadership does not reside exclusively in the leader but is also a property of the collective and thus has both individual and collective qualities. Collective leadership also signals the importance of shifting attention from the single leader to the emergent processes and practices that help employees interact and advance a common goal unattainable by themselves. Csizmadia et al., (2022) noted that leadership is the most influential factor in shaping organizational culture to enable employees' commitment and performance. Therefore, the need to shift from the traditional, single-leader focus towards a more inclusive, shared approach to leadership. In addition, leadership is not domiciled in one individual but in a team that can collectively share to fit with task demands (Wu and Cormican, 2021).

In recent times, collaborative approaches have taken root within the framework of public policy and workplace settings and the idea that leadership for the common good resides within a single individual leader has started to lose its ideology (Cakir and Adiquzel, 2020). New interest in how to foster a more facilitative, integrative and inclusive environment to address collaborative administration within the organization has also motivated questions about the nature of leadership both in public and private organizations, hence the need to attend to collective leadership competencies in the workplace (Ospina and Foldy, 2020). The concept of collective leadership implies shared leadership (Covey et al, 2019), distributed leadership team leadership (Zaccaro et al., 2022), distributed leadership, team leadership (Zaccaro et al., 2022), shared decision-making, transformation, leadership (Cherry, 2018), relational leadership (Zhang et al., 2019) and constructive leadership (Wei et al., 2020).

Employees may be viewed as individual leaders who are collectively participating in the distributed leadership role, as members of a team sharing common goals and collaboratively working together to attain organizational objectives (Le-Blane et al., 2020). Collective leadership is also conceptualized as a dynamic team phenomenon where leadership roles are distributed (De Brun et al., 2020) and shared among the team. Its imply leadership as a phenomenon that implicates all members of a group rather than one or even several individual members. It is sometimes used to describe forms that incorporate more than one person in the leadership role such as in team leadership or to

refer to situations where the leadership role is fluid and rotated among the people, this variation is referred to as collectivistic leadership.

Furthermore, leading collectively does not exert an emphasis on individual employees rather but on teamwork as a collective effort of a whole team within the organization. Employees together keep an eye on the end results and consciously strive to achieve the target while transforming the organization. Therefore, collective leadership is also known as transformation leadership. Caviglia-Harris et al., (2021) emphasized that the transformational leadership role helps to improve the work relationships between subordinates and leaders while according to Kuenkel and Weddock (2019), transformational leadership and commitment are linearly dependent and the effect on commitment was moderate. Therefore, collective leadership is a cultural aspect rather than individual leadership style and it can emerge from the transformational and distributed styles of leadership. He also noted that when leadership roles and responsibilities are shared, it starts transforming the behaviours of employees and eventually brings a permanent change in their attitudes and hence fosters improved job performance.

It should be noted that collective leadership is also seen as a leadership development at all levels that is related to the concept of collective learning which guides employees on the learning process in a collaborative environment. Kuenkel and Weddock (2019) position on the collective approach to leadership development, proposed a list of indicators that measured the degree to which an organization develops leadership at all levels. These measures include the focus on developing employees at all levels by making it a priority of strategic importance, managerial encouragement and structural support for adopting leadership behaviour, the commitment of senior employees to develop other team members as leaders, and systematic leadership training programs for all employees. He concludes that when there is collective leadership in an organization, employees will have a shared vision, have a sense of ownership, take the initiatives to solve problems through experimentation, and carry the common language of leadership (Caviglia-Harris, 2021; Ni, et al., 2018).

The study provided empirical evidence on the practicability of leading collectively which describes the incorporation of more than one researcher in the leadership role such as in co-leadership, team leadership, and or shared leadership. The view of this paper is also to ascertain the leadership dimension as an indicator in the leadership compass. The study examines the perception of agricultural researchers in Nigeria on collective leadership competencies and how this influences their work performance. The study analysis is based dimension of collective leadership which is enshrined in the collective leadership compass. The study's analysis was guided by the following research objectives; examine researchers' future possibilities in the organization, level of work engagement, and innovation level, and assess shared values by fostering relationships (humanity). Others are assessing the level of collective intelligence and wholeness that is, staying connected with the organization's goals. The study also hypothesized if there exists a significant association between socioeconomic variables and collective leadership dimension.

Methodology

The study was carried out in Oyo State, Southwest geopolitical zone of Nigeria with the coordinate of 8.1570 N and 3.01470 E. as the study population were all agricultural researchers in all the agricultural research institutes in Oyo State, Nigeria. Two-stage sampling procedure was used to select one-hundred and seventy-seven (177) agricultural researchers from five (5) research institutes. The first stage involved the purposive selection of two colleges of agriculture and three research institutes. The five research institutes selected were; Cocoa Research Institutes of Nigeria (CRIN), Institutes of Agricultural Research and Training (IAR&T), National Centre for Genetic Resources and Biotechnology (NACGRA), Federal College of Agriculture, Ibadan (FCAB) and Federal College of Animal Health and Production Technology (FCAH&PT) from where the sample frame of the respondents from the five (5) research institutes was generated. This gave a total of 303 respondents (68 from CRIN, 87 from IAR&T, 45 from 48 from FCAB and 55 from FCAH&PT) as at 2022. The second stage involves the proportionate selection of respondents using Watson's (2021) sampling determination at variation in sample size determination of 90% of the total respondents of the selected agricultural institutes which gave a sample size of 177 respondents used for this study. The fieldwork was conducted in 2022.

This study adopted the theoretical model collective leadership compass by Kuenkel and Weddock (2019). The model has six distinct dimensions of leadership, which include, future possibilities, engagement, innovation, humanities, collective intelligence and wholeness. For each dimension of collective leadership, 6 indicators statements were developed and subjected to 6 point rating scale of daily (6), every other day (5), weekly (4), fortnightly (3), monthly (2), and yearly (1) for positive statements and was reversed for the negatively worded statements. The maximum obtainable score was 216 with a minimum score of 36. The Cronbach alpha for the scale was 0.87 and sample items are; "I create an inspiring atmosphere when I lead (future possibilities), "investing time in relationship building" (engagement), and "nurturing my creativity and stay open to new ideas" (innovation). Others are "practising the culture of reflection-individual and collectively" (humanity), "establishing rituals for learning circles and regular review" (collective intelligence), and "Continuously refining my leadership contribution to future" (wholeness). Percentages, weighted mean scores, and logit regression analysis were used to analyse the data.

Results and Discussion

Compass Dimension of Future Possibilities and Engagement

Results in Table 1 show the employees' distribution according to their future possibilities and engagement. About 28.0% of the employee create daily and maintain clarity in their professional vision while 50.0% percent reiterates that on a daily basis, they focus on their purpose and potential impacts. Also, 36.3% celebrate success and share results as a joint achievement while 47.7% invested their time in relationship building. This connotes that employees maintained a clear professional vision, focus on their potential, celebrated success stories together and invested ample time in building cordial relationships with each other. This concurs with the report or finding of Alsaedi (2022) that collective

leadership creates a shared vision and fosters a sense of commitment, hence the human capacity for engagement is a core element of collective leadership.

Table 1: Compass dimension of future possibilities and Engagement

| Items | WMS | SD |
|---|-------|------|
| a. Future possibilities | | |
| Create and maintain clarity of my personal and professional vision | 341.5 | 1.88 |
| Nurture a culture of accountability for results. | 275.6 | 1.03 |
| Apply empowering ways of tracking my and others' progress. | 262.9 | 1.54 |
| Continuously build the expertise of myself and others. | 249.8 | 1.58 |
| Create an inspiring atmosphere when I lead. | 245.5 | 1.93 |
| Most of the time I focus on my purpose and potential impact | 183.8 | 1.77 |
| b. Engagement | | |
| Celebrate success and share results or success stories as joint achievements. | 302.7 | 1.79 |
| Implement planned action in complementary collaborations | 288.1 | 1.48 |
| Build trustful networks to bring my vision forward. | 257.2 | 1.57 |
| Invest time in relationship building | 256.3 | 1.66 |
| In the way I lead, I build structured step-by-step processes toward goals | 254.6 | 1.67 |
| Stay connected with others and connect others among themselves. | 230.1 | 1.88 |

Source: Field survey, 2022. WMS = Weighted Mean Score, SD = Standard deviation

Compass Dimension of Innovation and Humanity

Table 2 shows the employees' compass dimension of innovation and humanity. It was noted that 63.6% of the employees nurtured creativity and stay open to new ideas while 45.5% strive for mastery in their work-related pursuits. In addition, 54.0% and 47.7% noted that their communication is appreciative/constructive and practice collective reflection respectively. This implies that employees nourish sources of creative energy, pursue mastery to grow knowledge, communicate constructively, and ensure collective reflection. This is consistent with the findings of Kuenkel (2019) that innovation and creative need to take employees shared humanity into consideration.

Table 2: Compass dimension of innovation and humanity

| Items | WMS | SD |
|--|-------|------|
| a. Innovation | | |
| Generally turn crises into opportunities. | 271.0 | 2.63 |
| Strive for mastery in what I pursue | 252.1 | 1.48 |
| If difficulties occur I find ways to overcome them jointly. | 251.5 | 1.65 |
| Notice and take up emergent opportunities. | 241.0 | 1.54 |
| Stay tuned into best practices in my professional field | 213.5 | 1.59 |
| Nurture my creativity and stay open to new ideas | 195.5 | 1.88 |
| b. Humanity | | |
| Practice a culture of reflection individual collectively | 272.5 | 1.70 |
| Can integrate mine and others' individual interests | 244.8 | 1.44 |
| My communication is appreciative and constructive | 210.9 | 1.46 |
| Practice a culture of listening to concerns and stories (including my own) | 207.0 | 1.58 |
| Relationships & task accomplishment are equally important to me | 206.5 | 1.40 |
| Deeply respect people as people, even if I differ in opinion | 190.6 | 1.59 |

Source: Field survey, 2022. WMS = Weighted Mean Score, SD = Standard deviation

Compass Dimension of Collective Intelligence and Wholeness

The result in Table 3 shows the employees' distribution of collective intelligence and wholeness. About 38.0% of the employees noted the establishment of structured dialogues to harvest different perspectives, 54.5% listened to employees' differences and openly acknowledges them while over 45.0 percent appreciate and leverage complementary strengths. Furthermore, over 50.0% of the employees noted that they kept up-to-date with trends and development in their professional field, 41.5% of them fostered a culture of leveraging on each other strengths while 49.4% took a copious effort to refine their leadership skills. This infers that employees within research institutes in Oyo State do not only ensure collective decision in harvesting different opinions, but they also acknowledged employees' differences while leveraging on their strengths. This is in line with Azeem and Mataruna (2019) who conceptualized collective leadership as leadership development at all levels and hence ensure employees work efficiently and effectively for the development of the organization.

Table 3: Compass dimension of collective intelligence and wholeness

| Items | WMS | SD |
|--|-------|------|
| a. Collective intelligence | | |
| Establish structured dialogues to harvest different perspectives | 286.2 | 1.81 |
| Foster a collaborative and co-creative atmosphere in meetings | 312.7 | 1.68 |
| Can listen to differences and openly acknowledge them. | 205.4 | 1.41 |
| Appreciate and leverage complementary strength | 236.6 | 1.56 |
| Have established rituals for my own learning cycles and regularly review Progress toward my goals | 280.3 | 1.82 |
| In the way I lead, I have established a structure for collective learning and regularly review progress together with others | 282.8 | 1.67 |
| b. Wholeness | | |
| The context of my leadership contribution to transformative change is clear | 247.6 | 1.69 |
| keep up to date with trends and developments in my professional field | 249.1 | 1.78 |
| foster a culture of leveraging each other's strengths. | 247.8 | 1.57 |
| Support others and encourage them to do the same | 204.7 | 1.44 |
| Continuously refine my leadership contribution to future | 238.8 | 1.67 |
| Utilize my skills, power and connections to increase my effectiveness together with others | 213.2 | 1.58 |

Source: Field survey, 2022. WMS = Weighted Mean Score, SD = Standard deviation

Association between Biographies, Leadership Dimensions and Collective Leadership Competencies

The result in Table 4 shows that future possibilities ($\beta = 0.02$), Innovation ($\beta = 0.26$) among other collective leadership compass investigated among the respondents were significantly ($P=0.05$) related to researchers' collective leadership competencies. This implies that future possibilities and innovation were the identified collective leadership compass that positively influenced researchers' collective leadership in the study area. Also, the higher the level of future possibilities the better researchers desire to shape a better future collectively in the institution. More practically, it means that the way the collaborative leadership is co-designed ensures that over time all researchers drive strategy and implementation hence co-create future possibility. This help changes the

way they think and act and motivates them to work towards achieving organizational goals.

Table 4: Association between biographies, leadership dimensions and collective leadership competencies

| Variables | Beta value | T – Value |
|--------------------------|-------------------|------------------|
| Constants | 0.595 | 2.75* |
| Institutions | 0.016 | 0.93 |
| Age | 0.006 | 1.27 |
| Educational Status | 0.020 | 1.10 |
| Household size | 0.006 | 0.404 |
| Years of work experience | 0.05 | 1.823 |
| Marital status | 0.103 | 1.171 |
| Monthly Income | 0.005 | 1.16 |
| Future possibilities | 0.020 | 0.95* |
| Engagement | 0.007 | 3.34 |
| Innovation | 0.260 | 1.12* |
| Humanity | 0.001 | 0.17 |
| Collective intelligence | 0.003 | 0.56 |
| Wholeness | | |
| R | 0.841 | |
| R ² | 0.707 | |
| ΔR ² | 0.659 | |
| F | 15.00 | |
| df | 13/94 | |

Source: Field Survey, 2022; *P≤ 0.05

Conclusion and Recommendation

The most predominantly exhibited collective leadership compass used by agricultural researchers were future possibilities and innovation. They favorably nurture a culture of accountability for results and generally turned crisis into opportunities. The management of agricultural institutes in Nigeria should ensure that leadership workshops are organized for researchers in order to boost their skills in collective leadership.

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