

ON-SITE AND OFF-SITE WORK INTEGRATION AND EMPLOYEE ENGAGEMENT IN INTERNATIONAL AGRICULTURAL RESEARCH CENTERS IN NAIROBI COUNTY, KENYA

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ABSTRACT

Purpose of The Study: This study examined the relationship between on-site and off-site work integration (Hybrid Workplace Balance) on employee engagement in International Agricultural Research Centers (IARCs) in Nairobi County, Kenya.

Statement of the Problem: Flexibility can be achieved through hybrid working, while also posing challenges to coordination, communication, inclusion and continuity between office, remote and field work. Weak integration can diminish engagement gains from hybrid arrangements in IARCs where it can be common for work to be done both physically and virtually.

Methodology: The study adopted a cross-sectional descriptive and explanatory research design. The study population comprised 600 employees, from whom a sample of 240 was selected through stratified random sampling. A total of 232 usable questionnaires were returned. Data were analysed using descriptive statistics, Pearson correlation and multiple linear regression in SPSS Version 21, with hypotheses tested at a 5% significance level.

Results: Hybrid Workplace Balance recorded an overall mean of 3.86, while employee engagement recorded an overall mean of 3.87. Hybrid Workplace Balance had a strong, positive and statistically significant relationship with employee engagement ($r = .760$, $p < .001$). In the wider regression model, it remained a positive and significant predictor of employee engagement ($\beta = .355$, $t = 7.614$, $p < .001$) and recorded the largest standardised coefficient among the four hybrid work dimensions.

Conclusion: The study concluded that employee engagement is strengthened when on-site, remote and field-based work are integrated through clear coordination, consistent communication, inclusion and organizational support. However, flexibility across work locations is insufficient where work processes remain fragmented and disconnected.

Recommendation: Cross-location workflows should be enhanced, task ownership and task handover should be made clear, communication routines should be made location-neutral, and employee autonomy and work-life balance should be maintained and coordination should be enhanced between the field, the office and remote working.

Keywords: *N-Site, Off-Site Work, Integration, Employee Engagement, International Agricultural Research*

INTRODUCTION

Many knowledge-intensive institutions have made hybrid working a regular part of organizational life. The question is no longer simply whether employees should be permitted to work away from the office, but how effectively they can navigate between office-based, remote, and field-based work while maintaining access to information, colleagues, decision-making processes, a sense of belonging, and organizational support (Choudhury et al., 2021). This question is significant because, on paper, a hybrid policy could be flexible, but the reality of the day-to-day experience of work could still be fractured. That daily experience is likely to shape employee engagement. Employee engagement is reflected in employees' energy at work, the meaning and pride they derive from their roles, and the degree of focus and absorption they sustain while working (Muturi & Gichuki, 2022). From a Job Demands–Resources perspective, access to resources that enable employees to meet job demands helps sustain engagement (Bakker & Demerouti, 2007). In hybrid settings, these resources extend beyond technology and flexibility to include coordination, access to colleagues and information, role clarity, inclusion, and managerial support.

Remote and hybrid work have documented benefits and challenges. Telecommuting can increase autonomy and flexibility and reduce commuting demands, but it can also create communication difficulties, social isolation, blurred work–life boundaries, and coordination challenges (Allen, Golden, & Shockley, 2015; Wang, Liu, Qian, & Parker, 2021). Kniffin, Narayanan, and Anseel (2021) similarly argued that contemporary work design must account for the individual as well as the social and organisational context in which work occurs. These mixed outcomes indicate that formal flexibility alone does not guarantee effective hybrid work; the quality of integration across locations also matters. The present article reports one outcome of a broader study on hybrid working and employee engagement. It focuses specifically on On-site and Off-site Work Integration (Hybrid Workplace Balance) and its relationship with Employee Engagement. This focus is important because employees may work across office, field, laboratory, and virtual settings, making coordination, communication, inclusion, access to organisational resources, and work–life boundary management central to the quality of the hybrid employee experience (Oseghale et al., 2024).

The study was conducted among employees of participating International Agricultural Research Centers (IARCs) in Nairobi County, Kenya. These institutions provide an appropriate setting because their work is knowledge intensive, collaborative, and often distributed across

offices, laboratories, field locations, countries, and time zones. Employees may therefore alternate between physical and virtual work environments while maintaining continuity in research, administration, technical work, and stakeholder engagement. In this context, hybrid-work effectiveness depends not only on where employees work but also on whether work remains connected, coordinated, and supportive across locations (Handke et al., 2024). Examining this integration and its relationship with employee engagement is therefore important for understanding how hybrid work can support employees while maintaining organisational continuity and collaboration (Naqshbandi et al., 2023).

STATEMENT OF THE PROBLEM

Hybrid work has become increasingly embedded in knowledge-intensive organisations, yet access to flexible work arrangements does not necessarily produce an integrated or supportive work experience. Employees may work across office, remote, and field-based settings while still encountering communication gaps, unclear task ownership and handovers, unequal access to information and organisational resources, reduced inclusion in team processes, and difficulties maintaining continuity across locations (Fuchs & Reichel, 2023; Handke et al., 2024). Although remote and flexible arrangements can enhance autonomy and work-life balance, poorly coordinated arrangements may also create communication difficulties, blurred boundaries, social isolation, and team-coordination problems (Adisa et al., 2022; Oseghale et al., 2024).

The challenge is particularly relevant to International Agricultural Research Centers (IARCs), where work is knowledge-intensive, collaborative and frequently distributed across offices, laboratories, field locations and virtual environments. Research, administrative and technical responsibilities may therefore move repeatedly between locations, with some activities requiring physical presence and others being performed remotely. Hybrid work effectiveness in this context is not only about the possibility for employees to work from various locations, but also on how tasks, information, communication, organizational support, and participation are connected across these different locations (Handke et al., 2024).

Although research on flexible working, teleworking, and employee well-being has expanded, much of it examines flexibility, technology use, and work design broadly, especially during and after the COVID-19 pandemic. Less empirical attention has been given to on-site and off-site work integration as a distinct dimension of hybrid work and to how cross-location coordination, communication, inclusion, organisational support, and boundary management

relate to employee engagement (Willett et al., 2024). This gap is relevant in International Agricultural Research Centers in Kenya, where office, field, laboratory, and virtual work are routinely combined.

Consequently, it remains insufficiently understood whether employees who experience stronger integration across on-site, remote, and field-based work also report higher levels of vigor, dedication, and absorption. Without such evidence, organisations may emphasise flexibility while overlooking the integration required to translate hybrid arrangements into positive employee experiences. This article therefore examines the relationship between On-site and Off-site Work Integration (Hybrid Workplace Balance) and Employee Engagement among employees in participating International Agricultural Research Centers in Nairobi County, Kenya (Naqshbandi et al., 2023).

RESEARCH OBJECTIVES

To determine the relationship between on-site and off-site work integration (Hybrid Workplace Balance) and employee engagement among employees working in the participating International Agricultural Research Centers in Nairobi County, Kenya.

RESEARCH HYPOTHESIS

H₀: On-site and off-site work integration (Hybrid Workplace Balance) has no statistically significant relationship with employee engagement among employees working in the participating International Agricultural Research Centers in Nairobi County, Kenya.

THEORETICAL FRAMEWORK

The theoretical framework provides the basis for explaining the expected relationship between the study constructs and for interpreting the empirical findings. This study was anchored in Job Demands–Resources (JD-R) Theory and Social Exchange Theory (SET). The two perspectives provide complementary explanations of how the quality of on-site and off-site work integration may be associated with employee engagement.

Job Demands–Resources (JD-R) Theory

The Job Demands–Resources model, as articulated by Bakker and Demerouti (2007) and developed further in later work (Bakker & Demerouti, 2021), proposes that occupations contain job demands and job resources that shape employee well-being, motivation, and engagement. Job demands require sustained physical, psychological, or emotional effort and may produce

strain when they exceed employees' capacity. Job resources help employees perform their responsibilities, manage demands, achieve work goals, and support learning and personal development (Bakker & Demerouti, 2007).

Within a hybrid work environment, on-site and off-site integration may function as either a job resource or a job demand depending on how effectively it is managed. Well-coordinated hybrid arrangements can provide flexibility, autonomy, work-life balance, organisational support, and opportunities for collaboration across locations. These conditions can reduce unnecessary work pressure and provide resources that help employees remain energetic, committed, and focused. Conversely, poorly integrated hybrid work can create additional job demands. Communication gaps between remote and office-based staff, weak coordination, unclear field-to-office handovers, limited access to information, and exclusion from team activities can increase employees' cognitive and emotional burden. Time spent locating information, clarifying responsibilities, coordinating schedules, or compensating for communication failures may reduce the resources available for sustained engagement.

JD-R Theory is relevant to this study because Employee Engagement was measured through vigor, dedication, and absorption. The theory proposes a motivational process in which adequate job resources support employees' willingness and capacity to invest effort in their work. Effective cross-location integration may support vigor by reducing avoidable strain, dedication by maintaining connection with teams and the organisation, and absorption by enabling employees to focus regardless of work location. A limitation of JD-R Theory is that broad categories of demands and resources can operate differently across employees and contexts. This is especially relevant to hybrid work because flexibility may function as a resource for one employee but as a boundary-management challenge for another. Nevertheless, the theory remains useful because it explains how the quality of hybrid-work design and integration may shape employee engagement.

Social Exchange Theory

Social Exchange Theory, associated with Blau (1964), offers a complementary perspective on hybrid-work integration and employee engagement. The theory is grounded in reciprocity and proposes that favourable treatment within social relationships can generate a felt obligation to respond positively. Employees may interpret organisational policies and managerial practices as signals of how much the organisation values and supports them. When hybrid arrangements provide equitable access to information, supportive leadership, effective communication,

participation opportunities, and adequate resources across locations, employees may perceive trust and organisational support and reciprocate through stronger commitment, discretionary effort, and engagement.

This study therefore used Social Exchange Theory because on-site and off-site integration is not merely a work arrangement but also an employee experience. Field-based and remote employees may assess whether they receive the same information, participation opportunities, managerial attention, and organisational support as on-site employees. When hybrid arrangements are experienced as inclusive and equitable, employees may respond with a stronger sense of belonging and greater vigor, dedication, and absorption. Social Exchange Theory does not, however, fully explain the operational challenges involved in coordinating work across multiple locations. Employees may feel valued by the organisation while still experiencing inefficient handovers, communication delays, or unclear responsibilities. SET therefore complements rather than replaces JD-R Theory in the present study.

Together, the two theories provide a stronger explanation of the proposed relationship. JD-R Theory explains how effective cross-location integration can provide practical and psychological resources that support engagement, while Social Exchange Theory explains how employees may reciprocate supportive, inclusive, and flexible organisational practices through greater engagement. The theories therefore provide the basis for examining whether Hybrid Workplace Balance is significantly associated with Employee Engagement among employees in International Agricultural Research Centers in Nairobi County, Kenya.

EMPIRICAL REVIEW

On-site and off-site work integration concerns the extent to which work remains coordinated and continuous across different work locations. In this study, the construct captured employees' experiences of cross-location coordination, collaboration, inclusion, task clarity, communication consistency, organisational support, work-life balance, team cohesion, and continuity between on-site and off-site work. This operationalisation moves beyond the number of days worked remotely and focuses on the quality of employees' experience as they move across work settings (Oakman et al., 2022).

Theoretical and empirical research indicates that flexible and remote work can produce positive outcomes when supported by an appropriate organisational environment. Allen, Golden, and Shockley (2015) reported that telecommuting can provide flexibility and autonomy, although

outcomes depend on how it is implemented. Wang et al. (2021) similarly found that autonomy, social support, workload, monitoring, and coordination shape the effectiveness of remote work. These findings indicate that the availability of remote work and the successful integration of hybrid work are not synonymous; employees may still experience delayed decisions, unclear handovers, exclusion, or unequal access to organisational resources. Kniffin et al. (2021) noted that contemporary flexible-work arrangements require attention to work design, communication, social interaction, and employee well-being. The viability of remote and hybrid work therefore depends not only on location but also on whether organisational systems support collaboration, social connection, and access to assistance. These issues become especially important when geographically dispersed employees perform interdependent tasks without continuous face-to-face interaction.

The relationship between flexible work and employee outcomes is not uniformly positive. Flexibility may strengthen autonomy and work-life balance, but it can also generate communication difficulties, professional isolation, work-life imbalance, and challenges to team cohesion (Allen et al., 2015; Wang et al., 2021). The benefits of hybrid work therefore depend on implementation. Organisations need communication routines, equitable information sharing, coordinated tasks, supportive management, and deliberate inclusion regardless of employees' work location. International Agricultural Research Centers add an operational dimension to hybrid-work integration because their activities may span offices, laboratories, specialised equipment, physical records, stakeholder engagements, field sites, and geographically dispersed teams. Some activities require physical presence while others can be completed remotely. The management challenge is therefore not to make every activity remote, but to create predictable links between tasks conducted in different locations and to reduce friction as responsibilities move among field, office, laboratory, and virtual environments (Handke et al., 2024).

Employee engagement is another important consideration when assessing the effectiveness of hybrid working arrangements. This study conceptualized employee engagement in terms of vigor, dedication, and absorption, consistent with the Utrecht Work Engagement Scale tradition (Schaufeli et al., 2006; Salamon et al., 2021). Vigor reflects energy and resilience at work, dedication reflects enthusiasm, pride, significance, and purpose, while absorption reflects concentration and immersion in work (Van Tuin et al., 2021). Employee engagement therefore extends beyond job satisfaction to reflect the extent to which employees invest their cognitive,

emotional, and physical energies in their work. Previous empirical work suggests that employee engagement is shaped by the work context. Saks (2021) linked engagement to the organisational environment and the relationship between employees and their organisation. From a work-design perspective, employees are more likely to remain engaged when they have adequate resources to meet job demands (Bakker & Demerouti, 2007). In hybrid work, communication, access to information, autonomy, managerial support, and cross-location coordination can function as resources, whereas poor communication, unclear roles, inadequate support, and ineffective handovers can become additional demands.

Taken together, the empirical literature suggests that the relationship between hybrid work and employee engagement depends substantially on the quality of integration rather than location alone. Employees who can access information, collaborate, remain included, and maintain focus across locations are more likely to report energy, commitment, and concentration (Naqshbandi et al., 2023). Conversely, fragmented communication and coordination can weaken the potential engagement benefits of flexible work (Fuchs & Reichel, 2023). Although research in this area is expanding, much of the empirical literature addresses teleworking, remote-work effectiveness, employee well-being, and work design at a broad level, especially during and after the COVID-19 pandemic (Kniffin et al., 2021; Wang et al., 2021). Less attention has been given to on-site and off-site integration as a distinct hybrid-work dimension and its relationship with employee engagement in International Agricultural Research Centers in Kenya. The combination of office, field, laboratory, and virtual work in these institutions makes cross-location integration especially relevant. This study addresses that contextual and empirical gap (Eng et al., 2024).

CONCEPTUAL FRAMEWORK

The conceptual framework provides a diagrammatic representation of the relationship between the predictor and outcome constructs (Kothari & Garg, 2020). In this study, On-site and Off-site Work Integration (Hybrid Workplace Balance) is the predictor construct, while Employee Engagement is the outcome construct represented through vigor, dedication, and absorption.

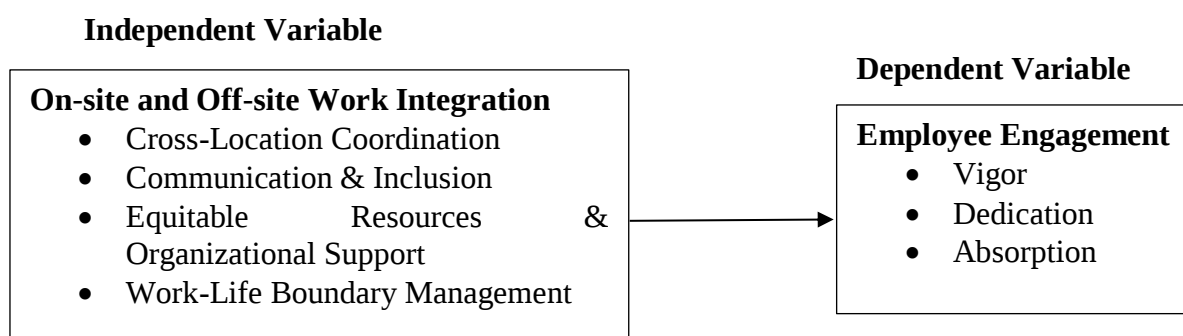


Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

This article draws on data collected as part of a wider study on hybrid work practices and Employee Engagement among employees in participating International Agricultural Research Centers (IARCs) in Nairobi County, Kenya. The broader study examined four dimensions of hybrid work practices, while the present article focuses on the fourth objective concerning On-site and Off-site Work Integration (Hybrid Workplace Balance) and Employee Engagement. The wider study adopted a cross-sectional descriptive and explanatory research design. The descriptive component summarised employees' perceptions and experiences of hybrid work and engagement, while the explanatory component assessed statistical relationships among the study variables. The cross-sectional approach enabled data to be collected at one point in time and was appropriate for examining the relationship between Hybrid Workplace Balance and Employee Engagement in the participating IARCs.

The study population comprised 600 employees from the participating International Agricultural Research Centers. A sample of 240 respondents was selected using stratified random sampling to improve representation across participating institutions and employee categories. This approach was appropriate because employees worked in varied institutional and occupational settings while sharing experience with hybrid work arrangements. Primary data were collected using a structured self-administered questionnaire aligned with the study variables and objectives. For this article, the analysis focused on On-site and Off-site Work Integration (Hybrid Workplace Balance) and Employee Engagement. Hybrid Workplace Balance was assessed through Cross-Location Coordination, Communication and Inclusion, Equitable Resources and Organisational Support, and Work-Life Boundary Management. Employee Engagement was assessed through vigor, dedication, and absorption.

A pilot testing, validity and reliability testing of the research instrument was done prior to the main data collection. For the pilot study, a total of 24 respondents were sampled (10% of the respondents in the main study) from the International Centre of Insect Physiology and Ecology (ICIPE) not covered in the main study. Exploratory factor analysis was used to assess the construct validity with the Kaiser Meyer Olkin's (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The KMO values for all the study constructs were more than 0.50, Bartlett's tests were found to be statistically significant ($p < 0.05$) and the factors with factor loading of 0.50 and above were retained. Cronbach's alpha was employed as the internal consistency. The 12 items of Hybrid Workplace Balance had an alpha coefficient of 0.853 and the 12 items of Employee Engagement had an alpha coefficient of 0.892. The internal consistency of the scales in the main study were good with both coefficients above the commonly applied minimum of 0.70. The study was approved by the National Commission for Science, Technology and Innovation (NACOSTI) under Research Licence No. NACOSTI/P/26/4189946 (Ref. No. 822446), issued on 26 May 2026. The licence authorized the conduct of the research in Nairobi for the specified research period. The responses were solicited through voluntary participation and informed consent was obtained at the start of the data collection from all respondents. All respondents were assured confidentiality and anonymity, and all information gathered were used only for academic research. Completed questionnaires were checked for completeness, consistency, and accuracy before coding and data entry. The data were then cleaned and analysed using SPSS Version 21. Descriptive and inferential statistical techniques were applied in accordance with the research objective.

Respondent characteristics and perceptions of Hybrid Workplace Balance and Employee Engagement were summarised using frequencies, percentages, means, and standard deviations. Pearson Product Moment Correlation analysis assessed the strength and direction of the relationship between Hybrid Workplace Balance and Employee Engagement. In the wider study, multiple linear regression assessed the unique contribution of each hybrid-work dimension to Employee Engagement while controlling for the other dimensions. This article reports the Hybrid Workplace Balance coefficient because it directly corresponds to the selected objective and hypothesis. The hypothesis was tested at a 95% confidence level and a 5% significance level ($\alpha = 0.05$). A p-value below 0.05 was interpreted as evidence of statistical significance, leading to rejection of the null hypothesis. A total of 240 questionnaires were distributed and 232 usable questionnaires were returned, producing a response rate of 96.7%. This response rate provided a strong empirical basis for the statistical analysis. Although the

data originated from the broader hybrid-work study, the present article deliberately limits its empirical focus to Hybrid Workplace Balance and Employee Engagement to maintain alignment among the objective, hypothesis, theoretical framework, analysis, and conclusions.

RESULTS AND DISCUSSIONS

The study drew a sample of 240 employees from a population of 600 employees in participating International Agricultural Research Centers. Of the 240 questionnaires distributed, 232 usable questionnaires were returned, representing a response rate of 96.7%. The high response rate provided a strong basis for the descriptive and inferential analyses. The results presented in this article are those of the fourth research objective, which investigated the relationship between On-site and Off-site Work Integration (Hybrid Workplace Balance) and Employee Engagement, amongst the four research objectives of the wider study. To this end, the analysis includes descriptive statistics for Hybrid Workplace Balance and employee engagement, as well as correlation and regression analyses to determine the nature, strength and statistical significance of the relationship between the two variables.

DESCRIPTIVE ANALYSIS

Descriptive analysis was conducted to summarise respondents' perceptions of On-site and Off-site Work Integration (Hybrid Workplace Balance) and Employee Engagement. Means and standard deviations were used to describe responses to individual questionnaire items and the overall pattern for each construct, with higher mean scores indicating more favourable perceptions.

Table 1: Descriptive Statistics

Statement	N	Mean	SD
The balance between off-site and on-site work is well-coordinated in my team.	232	3.92	0.74
Effective collaboration is maintained regardless of work location.	232	3.88	0.77
Hybrid work arrangements enhance my focus and energy for work tasks.	232	3.81	0.79
Employees are included in team activities regardless of work location.	232	3.85	0.76
Coordination of tasks between office-based and remote work is clear and efficient.	232	3.78	0.81
Communication between on-site and remote employees is consistent and effective.	232	3.83	0.74
Hybrid work supports my autonomy and engagement at work.	232	3.95	0.72
Field and office-based tasks are performed efficiently under hybrid work arrangements.	232	3.77	0.80
The organization provides adequate support to ensure hybrid work is effective.	232	3.84	0.73
Hybrid arrangements improve my work-life balance and well-being.	232	3.91	0.71
Integration of on-site and off-site work enhances team cohesion and collaboration.	232	3.86	0.75
Overall, hybrid workplace balance positively influences my engagement at work.	232	3.93	0.70
Overall Mean		3.86	

As shown in Table 1, Hybrid Workplace Balance recorded overall M of 3.86, indicating that respondents generally held favourable perceptions of the integration of on-site and off-site work arrangements. The highest-rated item was that hybrid work supported employees'

autonomy and engagement ($M = 3.95$, $SD = 0.72$). This was followed by the perception that hybrid workplace balance positively influenced overall engagement ($M = 3.93$, $SD = 0.70$), that on-site and off-site work was well coordinated within teams ($M = 3.92$, $SD = 0.74$), and that hybrid arrangements improved work-life balance and well-being ($M = 3.91$, $SD = 0.71$). These findings suggest that respondents particularly valued hybrid work for the autonomy, flexibility, and work-life benefits it provided.

Although all the items recorded favourable mean scores, comparatively lower ratings were observed for the efficiency of performing field and office-based tasks under hybrid arrangements ($M = 3.77$, $SD = 0.80$) and the clarity and efficiency of coordinating tasks between office-based and remote work ($M = 3.78$, $SD = 0.81$). Hybrid work enhancing focus and energy recorded a relatively lower rating ($M = 3.81$, $SD = 0.79$). These findings reveal an important distinction: while employees experienced the personal benefits of hybrid work positively, the operational integration of work across locations was comparatively less strong.

The pattern is especially useful for the International Agricultural Research Centers, with their activities sometimes taking place at multiple offices, laboratories, field sites and virtual environments. The findings indicated that hybrid working in these institutions is more effective if they not only offer flexibility for staff, but also organise it well and communicate and continue it at different work locations. This finding aligns with Wang et al. (2021), who maintain that the work design and organizational support have a critical role in supporting effective remote and hybrid work. Based on these findings, the research pinpoints cross-location coordination as an important dimension in which the hybrid work experience can be enhanced. Employee Engagement was then analysed through its three dimensions of vigor, dedication, and absorption. Table 2 presents the descriptive results.

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Table 2: Descriptive Statistics on Employee Engagement

Dimension / Statement	N	Mean	SD
Vigor: I feel energetic while carrying out my work.	232	3.91	0.72
Vigor: I remain mentally resilient even when my work is challenging.	232	3.87	0.75
Vigor: I persist in my work even when faced with difficulties.	232	3.85	0.77
Vigor: I willingly invest extra effort to ensure my work is completed successfully.	232	3.87	0.74
Dedication: I am enthusiastic about my work.	232	3.83	0.78
Dedication: I find my work meaningful and purposeful.	232	3.89	0.74
Dedication: I feel proud of the work that I do.	232	3.82	0.79
Dedication: Overall, I feel highly engaged in my work.	232	3.92	0.70
Absorption: I become fully immersed in my work activities.	232	3.90	0.71
Absorption: I become so involved in my work that time passes quickly.	232	3.84	0.76
Absorption: I find it difficult to detach myself from my work because I enjoy what I do.	232	3.88	0.73
Absorption: I remain focused on my work even when there are distractions.	232	3.86	0.75
Overall Mean		3.87	

As shown in Table 2, Employee Engagement recorded an overall mean of 3.87, indicating generally favourable engagement levels. The highest-rated item was ‘Overall, I feel highly engaged in my work’ ($M = 3.92$, $SD = 0.70$), followed by ‘I feel energetic while carrying out my work’ ($M = 3.91$, $SD = 0.72$) and ‘I become fully immersed in my work activities’ ($M = 3.90$, $SD = 0.71$). Respondents also reported a strong sense of meaning and purpose in their work ($M = 3.89$, $SD = 0.74$). Across the three dimensions, respondents generally reported vigor through energy and resilience, dedication through enthusiasm and involvement, and absorption through focus and immersion in work. Although item-level differences were evident, all means exceeded 3.80, indicating consistently favourable engagement experiences. The descriptive results show that both Hybrid Workplace Balance ($M = 3.86$) and Employee Engagement ($M = 3.87$) were rated favourably. Descriptive statistics alone, however, cannot establish whether the constructs are statistically related. Pearson correlation was therefore used to assess the strength, direction, and significance of the relationship between Hybrid Workplace Balance and Employee Engagement.

CORRELATION ANALYSIS

Correlation analysis assessed the strength and direction of the relationship between On-site and Off-site Work Integration (Hybrid Workplace Balance) and Employee Engagement among employees in participating IARCs in Nairobi County. Pearson Product Moment Correlation

was used, with coefficients ranging from -1 to +1 to indicate the direction and strength of association. Table 3 presents the results.

Table 3: Correlation Analysis

Variables	Employee Engagement	Hybrid Workplace Balance
Employee Engagement	1.000	.760**
Hybrid Workplace Balance	.760**	1.000

Pearson correlation analysis revealed a strong, positive, and statistically significant relationship between Hybrid Workplace Balance and Employee Engagement ($r = .760$, $p < .001$), as shown in Table 3. Employees who reported stronger integration of on-site and off-site work also tended to report higher engagement. This pattern suggests that better coordination, communication, inclusion, organisational support, and continuity across work locations are associated with higher levels of vigor, dedication, and absorption. The magnitude of the correlation indicates that on-site and off-site integration is an important feature of the employee work experience. From a practical perspective, hybrid work appears to be associated with more favourable employee experiences when cross-location work is well coordinated and organisational and social resources are accessible regardless of location.

The finding is consistent with Job Demands–Resources Theory (Bakker & Demerouti, 2007), which proposes that job resources support engagement by helping employees perform effectively and manage work demands. In this study, coordination, communication, inclusion, and organisational support across locations can be understood as job resources that help employees remain energetic, committed, and absorbed in their work. Because the study used a cross-sectional design, the correlation should not be interpreted as evidence that Hybrid Workplace Balance causes higher Employee Engagement. The finding demonstrates a statistically significant association between the two constructs in the study sample. Regression analysis was subsequently used to assess whether Hybrid Workplace Balance remained a statistically significant predictor when the other hybrid-work dimensions were included in the wider model.

REGRESSION ANALYSIS

The wider study used multiple regression to examine the predictive contribution of four hybrid-work dimensions to Employee Engagement: Flexible Remote Work Arrangements, Digital

Collaboration Tools, Flexible Time Scheduling, and On-site and Off-site Work Integration (Hybrid Workplace Balance). The broader model was reported as statistically significant with $N = 232$ and four predictors, $R^2 = .941$ would imply an F statistic of about 212.45 and an adjusted R^2 of about .935. Because the present article focuses on Hybrid Workplace Balance, Table 4 reports its coefficient from that broader model.

Table 4: Regression Result

Predictor	B	Std. Error	β	t	p
On-site and Off-site Work Integration (Hybrid Workplace Balance)	0.670	0.088	.355	7.614	< .001

As presented in Table 4, On-site and Off-site Work Integration was a positive and statistically significant predictor of Employee Engagement ($B = 0.670$, $\beta = .355$, $t = 7.614$, $p < .001$) after controlling for the other hybrid-work dimensions in the wider model. A one-unit increase in Hybrid Workplace Balance was associated with a 0.670-unit increase in Employee Engagement, holding the other predictors constant. Since $p < .05$, the null hypothesis was rejected. The standardised beta coefficient ($\beta = .355$) was the largest among the four hybrid-work dimensions examined in the wider model, indicating that Hybrid Workplace Balance made the strongest unique contribution to predicting Employee Engagement within that model. This comparison should be interpreted only within the present model and sample and does not imply that Hybrid Workplace Balance is more important than all other possible determinants of employee engagement.

The regression result is consistent with the descriptive and correlation findings. Hybrid Workplace Balance remained statistically significant after the other hybrid-work dimensions were included in the model and was also strongly correlated with Employee Engagement ($r = .760$, $p < .001$). The findings suggest that employees benefit not only from being able to work across locations but also from experiencing those locations as part of a coherent work system in which communication, responsibilities, and organisational support remain continuous. The findings are consistent with JD-R Theory. Effective Hybrid Workplace Balance can function as a job resource by reducing avoidable coordination demands while preserving flexibility. Poorly integrated arrangements, by contrast, can create additional demands through communication failures, unclear responsibilities, fragmented processes, and inefficient

transitions among office, remote, and field-based work. This interpretation is consistent with the theoretical framework, which treats well-integrated hybrid arrangements as potential resources and poorly integrated arrangements as additional job demands.

The findings can also be interpreted through Social Exchange Theory. Employees may perceive an inclusive and supportive hybrid-work model as evidence that the organisation values their contribution, trusts their ability to work across locations, and cares about their well-being. Such perceptions may encourage reciprocal responses in the form of commitment, discretionary effort, and engagement. The findings also help explain why organisations with apparently similar hybrid-work policies may experience different employee outcomes. Formal flexibility determines where employees may work, but integration determines whether information, meetings, handovers, and organisational support remain accessible when location changes. Weak integration can undermine flexibility when remote employees receive information later than office-based colleagues, participation depends on physical presence, or handovers between field and office work are unclear. Effective coordination allows employees to retain flexibility while preserving communication, inclusion, collaboration, and organisational connection.

This interpretation aligns with Kniffin et al. (2021), who argued that contemporary work design should focus not only on physical location but also on work design, social relationships, and employee well-being. This is especially relevant in International Agricultural Research Centers, where work may span office, field, laboratory, and virtual environments. The comparatively lower ratings for field-office task efficiency ($M = 3.77$) and clarity of cross-location coordination ($M = 3.78$) suggest that the next stage of hybrid-work maturity may involve improving the integration of existing work arrangements rather than simply increasing remote work.

CONCLUSIONS

This article examined the relationship between On-site and Off-site Work Integration (Hybrid Workplace Balance) and Employee Engagement among employees in participating International Agricultural Research Centers in Nairobi County, Kenya. Hybrid Workplace Balance had a strong positive correlation with Employee Engagement ($r = .760$, $p < .001$) and remained a positive and statistically significant predictor in the wider multiple-regression model ($\beta = .355$, $p < .001$). The null hypothesis was therefore rejected. The findings demonstrate that the value of hybrid work extends beyond flexibility over work location.

Employees reported favourable experiences of autonomy and work–life balance, whereas field-office efficiency and clarity of cross-location coordination were comparatively weaker. Integration quality therefore emerged as an important feature of effective hybrid work. Employees are better positioned to sustain vigor, dedication, and absorption when they can move across on-site, remote, and field-based work without losing coordination, communication, inclusion, access to organisational resources, or continuity. For knowledge-intensive organisations whose work spans field, office, laboratory, and virtual environments, the challenge is to create one integrated work system rather than parallel systems for employees in different locations. The study concludes that flexibility is more likely to support Employee Engagement when accompanied by effective cross-location coordination, inclusive communication, equitable organisational support, and appropriate management of work–life boundaries.

RECOMMENDATIONS

Participating IARCs should strengthen cross-location workflow design by establishing clear task ownership, handover points, timelines, and communication channels for work that moves between field, office, laboratory, and remote environments. This recommendation responds directly to the comparatively lower ratings for field-office task efficiency and clarity of cross-location coordination.

Managers should establish location-neutral communication and inclusion practices. Key decisions, work updates, documents, and participation opportunities should be accessible to employees regardless of work location rather than depending primarily on informal office-based interactions. Hybrid meetings should also be structured to provide comparable opportunities for participation by remote and on-site employees.

Organisations should preserve the valued benefits of hybrid work, including flexibility and autonomy, while avoiding expectations of constant availability. Clear guidelines on response times, meeting hours, availability, and protected focus periods can help employees maintain healthy work–life boundaries.

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