Academic Citizenship Behaviour Mediates Between Green Performance Management, Green Training and Development, and Organization Environmental Performance in The Jordanian Government Universities

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Abstract

Purpose: This paper aims to examine the academic citizenship behaviour mediating the effect between Green Performance Management, green training and development, and organization environmental performance in Jordanian government universities.
Research methodology: The paper contributes to filling this research gap by examining these effects. A sample of 404 employees in the Jordanian Government universities was analysed using contemporary variance-based structural equation modelling (Amos - SEM) software.
Results: Results: The findings revealed a favorable correlation between green training and development and two key variables: academic citizenship behavior and organizational environmental performance. Similarly, a positive relationship was observed between green performance management and both academic citizenship behavior and organizational environmental performance. Additionally, a direct positive association emerged between academic citizenship behavior and organizational environmental performance. Moreover, the results unveiled the mediating role of academic citizenship behavior in the relationship between green training and development, as well as green performance management, and organizational environmental performance.
Conclusion: This study offers valuable insights for HRM practitioners, emphasizing the significance of Green HRM practices in augmenting organizational environmental performance.
Keywords: Green Human Resource Management Practices, Green Performance Management, Green Training and Development, Academic Citizenship Behavior, and Organization Environmental Performance.

Introduction

In the pursuit of sustainable development, organizations across the globe are increasingly recognizing the importance of integrating environmental considerations into their operations. Within the educational sector, universities play a pivotal role not only in disseminating knowledge but also in fostering a culture of environmental responsibility and sustainability. In this context, the present study delves into the intricate interplay between green performance management, green training and development initiatives, academic citizenship behavior, and organizational environmental performance within the framework of Jordanian government universities (Alqudah & Yusuf, 2024).

Green performance management (GPM) has emerged as a strategic approach for organizations to align their performance measurement systems with environmental objectives and targets. It involves the systematic integration of environmental considerations into various aspects of organizational management, including goal setting, performance evaluation, and incentive mechanisms (Lambooj, 2011). The implementation of GPM practices within educational institutions holds the promise of not only reducing their environmental footprint but also instilling a culture of environmental consciousness among students, faculty, and staff.

Complementary to GPM initiatives, green training and development (GTD) programs are instrumental in equipping organizational members with the necessary knowledge, skills, and attitudes to engage effectively in environmentally sustainable practices (Paillé et al., 2014). By providing targeted training on environmental issues, sustainability principles, and best practices, universities can empower their academic community to become proactive agents of change in promoting sustainability both within and beyond the campus boundaries.

Central to the efficacy of GPM and GTD initiatives is the concept of academic citizenship behavior (ACB), which encompasses a range of voluntary behaviors exhibited by academic staff and students that contribute to the overall well-being and functioning of the academic community (Albattat & Som, 2013). Within the context of sustainability, ACB involves actions such as participating in eco-friendly initiatives, advocating for environmentally responsible practices, and integrating sustainability principles into teaching, research, and service activities. Drawing on the theoretical underpinnings of social exchange theory and organizational citizenship behavior, this study proposes that ACB serves as a crucial mediating mechanism through which the effects of GPM and GTD initiatives translate into enhanced organizational environmental performance (Zhao et al., 2016). By examining the mediating role of ACB, this research seeks to provide empirical insights into the mechanisms through which universities can leverage their human capital to drive environmental sustainability efforts.

Through a comprehensive analysis of data collected from Jordanian government universities, this study aims to elucidate the complex relationships between GPM, GTD, ACB, and organizational environmental performance. The findings of this research are expected to contribute to the existing literature on sustainability management in the higher education sector and offer practical implications for policymakers, university administrators, and sustainability practitioners seeking to foster a culture of environmental responsibility within academic institutions.According to Renwick et al (2013), GHRM is a policy, practice, and system that strives to improve employees' environmental, business, and individual priorities while also encouraging them to contribute to society's and the environment's well-being. Through GHRM's particular procedures, one can ascertain whether a company is aligned with environmental protection. Additionally, it emphasizes the ecosystem's fragility

and how the organization's economic actions affect the environment (Mishra et al. 2014). Tang et al (2018) mentioned that Green HRM adds to the wellness of the organization's internal and external stakeholders in addition to enhancing overall performance.

By fostering a culture of sustainability and overseeing sustainability projects, GHRM provides a source of competitive advantage (Sroufe et al., 2010). According to Jabbour et al. (2013), organizations can implement environmental strategies and goals by integrating organizational learning, performance reviews, job descriptions, training, recruiting, teamwork, selection, and organizational culture. Practitioners and academics from all over the world are drawn to GHRM. It alludes to procedures used by businesses to enhance environmental performance by emphasizing the human component of environmental management (Roscoe et al., 2019). According to Sharma and Gupta (2015), GHRM is still a relatively new phenomena in many countries, particularly in organizations, despite gaining a position in the literature and seeing a growth in its use in many organizations as a treatment for environmental degradation (Jabbour et al., 2013). Based on this background information, the conference paper's main focus is on the fundamental strategies for raising awareness among HR managers and staff about GHRM, resource utilization, and the green movement in order to support organizations' efforts to preserve and protect the natural environment for sustainable growth and the protection of employees' and customers' health and safety.

Employee green behavior is crucial for the environmental management system's successful implementation. Employee involvement, according to studies, is essential for an organization's EMS to be successful (Mazzi et al., 2016). Employee green behavior (EGB) also enables a company to improve its environmental performance and gain a competitive edge (Kim et al., 2019).

Objective of this Study

This research aims to measure the academic citizenship behavior effect between green performance management, green training and development, organization environmental performance.

1- To measure the effect of green performance management on organization environmental performance.
2- To measure the effect of green training and development on organization environmental performance.
3- To measure the effect of green performance management on academic citizenship behavior.
4- To measure the effect of green training and development on academic citizenship behavior.
5- To measure the effect of academic citizenship behavior on organization environmental performance.
6- To measure the academic citizenship behavior that mediates the effect between green performance management on organization environmental performance.
7- To measure the academic citizenship behavior that mediates the effect between green training and development on organization environmental performance.

Significance of this Study

This study sheds light on a new concept that has not been searched in detail in developing countries, especially Jordan. The critical investigation of the relationship between GHRM, academic citizenship behavior, and organization environmental performance is expected to

benefit the government, especially the Ministry of Higher Education & Scientific Research, policy makers, Government Universities, and academic lecturers. By investigating the relationship between green performance management and organizational environmental performance, this study provides insights into how universities in Jordan can effectively implement environmental management strategies. Understanding how green practices influence overall environmental performance is crucial for fostering sustainable practices within academic institutions.

The examination of green training and development programs sheds light on their effectiveness in promoting environmentally responsible behaviors among faculty and staff. Identifying the impact of such initiatives can inform the design and implementation of future training programs aimed at enhancing environmental awareness and competency among university personnel. Academic citizenship behavior encompasses actions undertaken by faculty and staff that contribute to the academic community's well-being and success. This study explores how academic citizenship behavior mediates the relationship between green management practices and organizational environmental performance. By elucidating the role of academic citizenship in fostering environmental sustainability, this research contributes to a deeper understanding of the factors influencing pro-environmental behaviors within academic settings.

The findings of this study hold implications for enhancing organizational environmental performance within Jordanian Government Universities. By identifying the mechanisms through which green management practices and training programs influence environmental outcomes, stakeholders can develop targeted interventions to improve sustainability metrics and reduce ecological footprints. Focusing specifically on Jordanian Government Universities situates this research within a unique socio-cultural and institutional context. The insights gained from studying environmental practices in this setting can inform policy decisions and practical interventions tailored to the specific needs and challenges faced by universities in Jordan.

In conclusion, this study not only contributes to the academic literature on environmental management and organizational behavior but also offers practical implications for promoting sustainability within Jordanian Government Universities. By elucidating the intricate relationships between green management practices, training and development initiatives, academic citizenship behavior, and organizational environmental performance, this research offers valuable insights for fostering a culture of sustainability within educational institutions.

Scope of the Study

The scope of this study includes investigating the academic citizenship behavior effect between green human resource practices on organization environmental performance. Only the academic lecturers in the Government Universities will participate in the survey. Huselid and Becker (2000) and Neal, West, and Patterson (2004) recommended that the sample include participants with the best knowledge of department operations and the subject matter. These academic lecturers. They typically acquire formal knowledge in this field from the university or take HRM courses and training to manage personnel.

The objective of the data collection process is to test the hypotheses on how different aspects of green HRM practices can drive organizational environmental performance. The result of the tests is limited to the specific sample of academic lecturers of Government Universities in Jordan.

Literature Review

Green Human Resource Management

The literature on green HRM has been relatively sparse, with only a few scholars providing definitions. Renwick et al (2008) define green HRM as the integration of environmental management principles into HRM practices. They emphasize the importance of aligning personnel strategies with the organization's environmental goals, including policies related to employment, performance management, training, labor relations, and rewards. In 2013, scholars further refined the concept, framing green HRM as a component of overall environmental management. Jabbour et al (2010) argue that green HRM involves incorporating environmental considerations into various HR functions such as job analysis, recruitment, training, and performance evaluation. Similarly, Jabbour (2011) views green HRM as encompassing practices that address environmental concerns alongside traditional HR functions, aligning with the organization's strategic and competitive objectives. Despite variations in emphasis, these definitions share common ground and complement each other. Consequently, synthesizing these perspectives, the researcher proposes a precise definition of "green human resource management" as the integration of environmentally conscious practices across all levels of HR operations within an organization.

To address the imperatives of environmental sustainability, green human resource management (GHRM) centers on the core tenets of conventional HRM while integrating environmental objectives, functions, and strategies. GHRM encompasses policies, procedures, and systems aimed at fostering eco-conscious behaviors among employees, benefiting individuals, society, the environment, and the organization as a whole (Arulrajah & Opatha, 2016). This integration marks the convergence of traditional HRM practices with environmental management principles (Bombiak & Kluska, 2018), aligning HR strategies with sustainability objectives. By incorporating HRM principles, GHRM facilitates the cultivation of a green workforce and promotes organizational sustainability. It serves as a holistic framework within the realm of corporate social responsibility, intertwining HR functions such as recruitment, training, and performance management with environmental initiatives (Renwick et al., 2013). Scholars advocate for the implementation of training programs, effective communication strategies, and organizational initiatives to reinforce environmental awareness and engagement among employees (Sammalisto & Brorson, 2008; Triana & Ortolano, 2005). These endeavors underscore the pivotal role of GHRM in fostering environmentally responsible practices within organizations while advancing broader sustainability objectives.

Research into green human resource management spans various industries, including manufacturing Yusliza et al (2019); Dumont et al (2017); Chaudhary (2020); Saeed et al (2019), healthcare (Saeed et al., 2019; Jia et al., 2018), and information technology (Ojo and Raman, 2019). However, there remains a notable dearth of studies addressing the integration of environmental sustainability initiatives through green human resource management within higher education institutions (Gilal et al., 2019). Highlighting the significance of talent and human resource management in university greening efforts, Hooi et al (2012) underscore the pivotal role of these strategies in fostering sustainability within academic settings. Galal et al (2019) advocate for the integration of green behavior into higher education's environmental management processes, emphasizing its potential to spur staff engagement and enhance the institution's economic and environmental efficacy. Consequently, for higher education institutions aspiring towards green governance, the adoption of green human resource management practices is recommended. Amin et al (2014) further support this notion,

emphasizing how human resource management techniques can align staff performance with the strategic objectives of higher education institutions.

Recent research in green HRM has increasingly focused on individual outcomes. Ojo and Raman (2019) note that current empirical investigations center on environmental HRM concerning factors like environmental attitudes, behaviors, indicators, loyalty, and performance. Pham et al (2019) delve into aspects of worker performance, particularly environmental staff behavior. Chaudhary (2019) highlights organizational commitment, psychological capital in environmental protection, and green climate psychology, along with the role of environmental green behavior (EGB) as mediators. However, gaps persist in understanding how green HRM influences employee behavior (Yong et al., 2019). Further exploration is needed to elucidate the critical mechanisms linking green HRM and EGB, including factors like environmental knowledge, warranting additional research (Ren et al., 2018).

Green Performance Management

Green performance management encompasses processes that entail establishing environmental goals and targets for employees, assessing their performance based on these objectives. It is imperative that green objectives and targets are clearly outlined in job descriptions and integrated into the performance review system (Mehta and Chugan, 2015). Jabbour et al (2008) define green performance management (GPM) as a framework for evaluating employees' contributions to environmental stewardship. Various components of GPM, such as feedback mechanisms and balanced interventions, have been investigated in research (Jackson et al., 2011; Zibbaras & Coan, 2015). However, the efficacy of GPM measurement methods is hindered by the diverse structural features and resources across companies, leading to challenges in establishing standardized practices (Marcus & Fremeth, 2009). To address this, companies must adopt a systematic approach to implementing GPM, with an increasing number prioritizing the adoption of common GPM standards. This study organizes GPM activities into four categories: establishing green goals for all employees, developing green performance indicators, assessing employee green performance, and addressing performance gaps (Milliman & Clair, 1996; Renwick et al., 2013). Emphasizing the importance of translating environmental goals into actionable plans, setting green goals for all staff members is essential (Milliman & Clair, 1996). Furthermore, to establish green performance indicators, a comprehensive set of environmental standards must be devised, covering aspects such as carbon emissions reduction, environmental incident reporting, environmental responsibility, and compliance with environmental legislation.

Green performance management and appraisal refer to the evaluation process through which employee behaviors and actions are assessed within the context of environmental management (Jabbour and Santos, 2008). Research by Jackson et al (2011) highlights common elements such as feedback provision within green performance management processes. However, studies also indicate that certain strategies may prove ineffective due to the diverse resources and structural characteristics across organizations, coupled with the absence of standardized regulations (Jasch, 2000). To address these challenges, organizations need to establish uniform standards for green performance management and explicitly define performance indicators for their members, such as reducing carbon emissions, promoting collaboration, and integrating environmental considerations into practice.

Green Training and Development

Green education aims to instill environmentally conscious behavior among employees within the workplace, emphasizing the cultivation of green skills, waste management training, and enhancing awareness of environmental issues (Roy & Therin, 2008). The significance of green training lies in equipping employees with the knowledge and tools to effectively manage environmental resources, promote energy-efficient practices, minimize waste, heighten organizational environmental consciousness, and engage in collaborative efforts to address environmental challenges (Zoogah, 2011).

Bhutto and Auranzeb (2016) conducted a study to assess the impact of green employment, training, development, and learning on business outcomes in Pakistan. Their findings revealed that employees tend to favor environmentally friendly companies, reporting higher levels of engagement and job satisfaction. The research underscores the importance of monitoring green practices and emphasizes that without implementing green human resource practices, firms may struggle to achieve sustainability and environmental performance. Okechukwu's work at the College of Technology and Logistics Management (2017) focuses on the influence, development, and productivity of staff members. The study demonstrates a positive correlation between green training, business success, and employee job satisfaction. Both studies provide valuable insights and guidance for organizational growth and personnel development, highlighting the role of education and development initiatives in enhancing job satisfaction within educational settings.

Academic Citizenship Behavior

According to Yong, Yusliza, and Fawehinmi (2019), the exploration of how green HRM shapes employee behavior is still nascent, warranting further investigation across diverse organizational contexts, including higher education. Additionally, there is a need for additional research to elucidate the pivotal interactions between green human resource management and employee civic engagement, particularly concerning environmental awareness (Ren et al., 2018).

Green behavior signifies actions undertaken by individuals who prioritize environmental preservation. Scholars such as Ones and Dilchert (2012a) underscore the importance of fostering environmentally friendly behavior (EGB) in the workplace. EGB, as defined by Ones and Dilchert (2012), encompasses measurable employee behaviors aligned with organizational environmental sustainability objectives. Block and Wagner (2014) elaborate that EGB entails conscious efforts by employees to minimize their environmental footprint through practices like prudent paper usage, energy conservation, and proper recycling. These behaviors not only support the implementation of organizational environmental management systems but also contribute to enhancing overall environmental efficiency (Dumont et al., 2017).

While previous studies have examined the relationship between green human resource management and employee environmental citizenship behavior (ECB) (Dumont et al., 2016; Kim et al., 2019; Saeed et al., 2019), limited attention has been paid to staff performance, particularly within the context of higher education. The impact of environmental factors on green human resource management practices has been underemphasized (Ren et al., 2018). Pinzone et al (2019) suggest that despite the implementation of green HRM techniques, some employees may still lack the necessary skills to engage in environmentally responsible actions. Therefore, effective implementation of green HRM solutions is crucial in influencing

employees' intrinsic motivation, talent, and performance. Green training (GT) has been identified as a means to enhance employees' understanding of environmental issues and potential solutions (Pinzone et al., 2019).

Studies, such as Mishra (2017), indicate that green human resource management influences the training and motivation of employees toward organizational goals, such as environmental sustainability initiatives. By clarifying expectations and showcasing the benefits of environmental sustainability, organizations can bolster employee dedication to practicing EGB and supporting sustainability projects, thereby fostering motivation.

Organization Environmental Performance:
Environmental efficiency denotes a company's efforts toward fostering a green environment, which is integral to the success of its core operations. It encompasses measurable outcomes derived from an environmental management system, reflecting the organization's commitment to environmental goals and objectives (Ikhsan, 2008). The efficacy of an organization is the culmination of its various operations, assessed by comparing its current performance against predefined benchmarks (Ghosh & Mukherjee, 2006). Drawing from the resource-based theory, effective resource management can generate synergy, enhancing operational efficiency and positioning the company as a market leader (Ghosh & Mukherjee, 2006). The extent of a company's engagement in environmentally friendly practices serves as an indicator of environmental efficiency, mitigating the adverse impacts of production processes on the environment (Wong et al., 2013). Environmental efficiency involves implementing initiatives that yield positive environmental outcomes, encouraging companies to adopt effective environmental management strategies to reap the benefits of environmental stewardship (Jackson & Seo, 2010). Numerous studies have demonstrated the significant and positive impact of various green human resource management practices on organizational and environmental performance. Practices such as green employment, green education, and green awards have been shown to enhance organizational environmental performance and confer a competitive advantage (Mandip, 2012; Paille et al., 2014; Ahmad, 2015; Renwick et al., 2013; Masri & et al.; Roy & Xastagir, 2016)

Previous studies
GHRM and Organizational Environmental Performance
A study on organizational environmental performance in Jordanian health service organizations was undertaken by (Rawashdeh, 2018). In Jordanian health care companies, this study investigates the connection between green human resource management (HRM) strategies, such as green recruiting and selection, green training and development, and environmental performance. The findings demonstrate a moderate adoption of green human resource management in Jordanian hospitals; the recruitment and selection processes had the strongest link, and training and development had the smallest correlation. Additionally, a statistically significant correlation between the three HRM practices and environmental performance was found. This study, which is said to be the first of its kind in Jordan, examined how environmental performance may be provided through human resource functions in hospitals and other health service organizations. It supports the body of literature on environmental preservation and green human resource management, which is underdeveloped in developing nations like Jordan. The study suggests that greater sample sizes should be sought after. Additionally, research that involves a variety of collaborating industries is more valuable (Rawashdeh, 2018).

Green performance management (GPM) has emerged as a critical aspect of organizational sustainability, focusing on integrating environmental goals and strategies into performance evaluation processes. This literature review explores the relationship between GPM and organizational performance, drawing insights from recent studies and scholarly contributions. Research suggests a positive association between GPM practices and organizational performance outcomes. Organizations that effectively implement GPM initiatives tend to achieve better environmental performance metrics and overall sustainability goals (Renwick et al., 2013; Jackson et al., 2011).

Green training and development (GT&D) have gained prominence as essential components of organizational strategies aimed at enhancing environmental sustainability and performance. This literature review examines the relationship between GT&D initiatives and organizational performance, drawing insights from recent studies and scholarly contributions. Research suggests that GT&D initiatives positively influence organizational performance outcomes. Organizations that invest in comprehensive GT&D programs tend to experience improvements in environmental performance metrics, cost savings, innovation, and overall sustainability (Jabbour et al., 2010; Pham et al., 2019).

According to the studies, the researcher showed a positive and significant effect between green performance management, green training and development, and organization environmental performance, supporting the (H1, H2).

H1: Green performance management are positively effect on organization environmental performance.
H2: Green training and development are positively effect on organization environmental performance.

GHRM and Academic Citizenship Behavior
Research conducted by Yong et al (2019) shed light on the relationship between knowledge acquisition and employee behavior within human resource management practices. This study investigates the impact of green human resource management (green HRM) on green employee behavior (EGB) by educating professors at public research universities in Malaysia on environmental issues. The findings indicate that general environmental literacy mediates the influence of green HRM on EGB, suggesting theoretical implications for motivation, ability, and opportunity concepts (Yong et al., 2019).

Dumont et al (2016) conducted a study on the evolving concept of green HRM, conceptualized to shape the green behavior of employees in the workplace. The results reveal that green HRM directly and indirectly influences green behaviors within specific roles, with the indirect influence on additional roles mediated by psychological green climate. While individual green values moderate the effect of psychological green climate on additional green behaviors, they do not attenuate the impact of green HRM or psychological green climate on green role behaviors. These findings suggest that green HRM shapes the behavior of green employees across various roles and functions, facilitated by diverse social and psychological processes. The recommendations from this research encourage further exploration of employee non-green attitudinal and behavioral outcomes of green HRM, offering potential contributions to HRM literature on its impact on employee workplace outcomes (Dumont et al., 2016).

While previous studies have examined the relationship between green human resource management (GHRM) and environmental citizenship behavior (ECB), less attention has been given to the influence of green HRM on employee behavior. There is a need to explore the

potential and environmental impact of mediation, particularly in the higher education sector. Additionally, the environmental dimension of green HRM strategies requires more attention. Some argue that despite the implementation of green HRM techniques, employees may still lack the necessary skills to engage in environmentally friendly actions. This underscores the importance of efficient adoption of green HRM strategies to influence employees' intrinsic talent, motivation, and performance. Employees receiving green training (GT) demonstrate greater awareness of environmental issues and potential solutions (Pinzone et al., 2019).

According to the studies, the researcher showed a positive and significant effect between green training and development, green performance management, and academic citizenship behavior, supporting the hypothesis (H3, H4) and sub hypothesis.

H3: Green performance management are positively effect on academic citizenship behavior.
H4: Green training and development are positively effect on academic citizenship behavior.

Academic Citizenship Behavior on Organization Environmental Performance.
Wiernik et al (2016) conducted a study titled "Age and Employee Green Behaviors: Effect on Environmental Performance - A Meta-Analysis." In this meta-analysis, the researchers examined 132 independent correlations and 336 d-values derived from 4676 professional employees across 22 samples in 11 countries to assess age disparities and their impact on green behaviors. Contrary to common belief, the study found marginally favorable associations between age and pro-environmental actions, suggesting that older individuals exhibited these behaviors slightly more frequently in the workplace. Specifically, behaviors such as conserving resources, avoiding harm, and taking initiative displayed linear relationships with age, although non-linear patterns were observed for behaviors related to self-change and influencing others. The research highlights the significant role of employees' sense of environmental responsibility and demonstrates that green behaviors among employees have a positive impact on environmental performance (Dilchert et al., 2016).

Employee Green Behavior (EGB) refers to quantifiable behaviors that support workplace environmental sustainability goals, as defined by (Ones and Dilchert, 2012). Block et al (2014) further define EGB as the conscious efforts of employees to reduce the adverse environmental effects of their behavior, such as improving paper usage, minimizing electricity waste, and properly recycling goods in the workplace. These behaviors not only contribute to environmental sustainability but also encourage organizations to enhance their environmental efficiency and effectively implement EGB within their organizational environmental management systems.

According to the studies, the researcher showed a positive and significant effect between academic citizenship behavior and organization environmental performance, supporting the hypothesis (H5).

H5: Academic citizenship behavior at Government Universities is positively effect on organization environmental performance.

Academic Citizenship Behavior that's mediates the affect between Green Human Resource Practices on Organization Environmental Performance.
Al Kerdawy (2019) conducted a study titled "Green Human Resource Management Practices and Employee Behavior in an Environmental Organization: An Interactive Impact of Green Emotions." This study aims to explore the relationship between green human resource

management (GHRM) and Organizational Citizenship Behavior for the Environment (OCBE), with a focus on examining the potential mediating role of green emotions. Adopting a constructive quantitative research methodology, the study employed empirical measurements and statistical techniques to test its hypotheses. By utilizing the most recent literature, the study investigated reciprocal changes and interconnections among variables including GHRM, OCBE, and green emotions. Quantitative data analysis was conducted using SPSS. The findings indicate that OCBE and green passion are positively influenced by GHRM, with the association between GHRM and OCBE significantly mediated by green emotions.

Mayangsari and Nawangsari (2019) conducted a study investigating the impact of green employment and environmental training on green employee behavior, with environmental behavior as a mediating variable. Utilizing a quantitative approach, the study focused on measurement and sampling methods. Conducted at PT Wira Cipta Perkasa, the study employed a simple random sampling method, resulting in a total sample of 100 individuals. Data analysis was performed using Structural Equation Modeling (SEM) with Partial Least Squares (PLS) software. The study revealed that green employment, green training, and green employee behavior significantly and positively impact environmental behavior. Based on these findings, the study provides several recommendations: 1) Improving the recruitment process at PT Wira Cipta Perkasa, including utilizing internet-based recruitment systems; 2) Incorporating environmental standards into job descriptions and recruiting candidates with environmental awareness; 3) Enhancing the training system to facilitate knowledge acquisition, particularly regarding environmental issues, to improve the company's environmental performance; 4) Cultivating a work culture that prioritizes environmental care to instill a sense of environmental responsibility among employees; and 5) Implementing corporate social responsibility programs to raise employee awareness and promote environmental initiatives within the company (Mayangsari & Nawangsari, 2019).

Several researchers have found a positive relationship and effect between GHRM and Environmental organizational performance and employee citizenship behaviors (Al Kerdawy, 2019; Mayangsari & Nawangsari, 2019; Yong et al., 2019).

According to the studies, the researcher showed that academic citizenship behavior positively affects green human resource practices on organization environmental performance and supports the hypothesis (H6, H7).

H6: Academic citizenship behavior effect positively between green performance management on organization environmental performance.

H7: Academic citizenship behavior effect positively between green training and development on organization environmental performance.

Study Model

Smyth (2004) posits that a research framework is constructed upon concepts and theories that facilitate problem identification and the formulation of research questions within relevant literature. The framework involves the interaction of dependent, independent, and mediating variables. An independent variable is one manipulated by the researcher to bring about changes or effects in the dependent variable, whereas the dependent variable represents the data measured, monitored, or predicted to be influenced by the independent variable. The observed relationship between an independent variable and its dependent variable is elucidated by the mediating variable.

In the context of the study titled "The Academic Citizenship Behavior Effect Between Green Human Resource Practices on Organizational Environmental Performance in Government Universities in Jordan," four variables are of particular interest. Among these, two are independent variables, namely green performance management, and green training and development. The dependent variable, organizational environmental performance, hinges on these independent variables, as illustrated in Figure 1. Additionally, the mediating variable in this study is academic citizenship behavior.
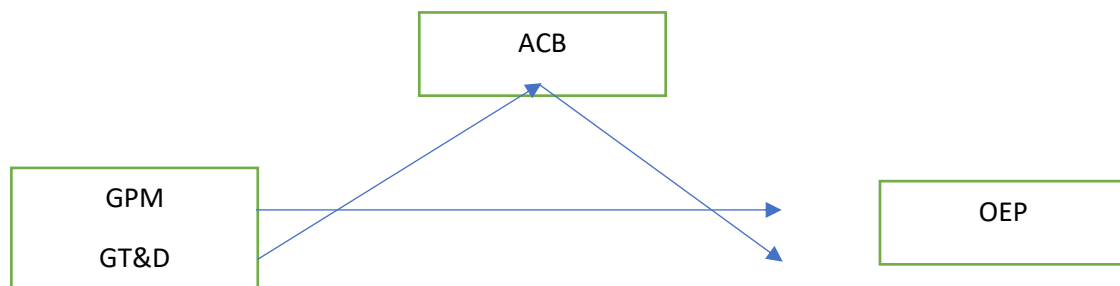

Figure 1. Study Model

Research Methodology
Methods and Instruments
This research employed a quantitative survey methodology, with Structural Equation Modeling (SEM) utilized in the analysis phase. The study participants were academics from Jordanian government universities, encompassing ten institutions: The Hashemite University, The University of Jordan, AL-Hussein Bin Talal University, Yarmouk University, Mutah University, Tafila Technical University, Jordan University of Science & Technology, Al albayt University, AL-Balqa Applied University, and German Jordanian University.

Sample and Procedures
Data from academics in Jordanian government universities were collected using a self-administered questionnaire. The universities were briefed about the research objectives prior to data collection. A convenient sampling technique was employed for participant selection. Subsequently, the final version of the questionnaire was distributed via email to the heads of HR departments, who then forwarded it to permanent academics within their respective institutions. A 10-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (10) was utilized to gauge responses to all items. Initially, 450 employees were invited to participate in the survey. Upon completion, 420 responses were received, with 16 responses deemed incomplete. Hence, the final sample size for this study consists of 404 participants. Further details regarding participant profiles are presented in Table (1).

Table 1
Demographics Profile

Variable		Frequency	Percentage%
Gender	Males	343	84.9%
	Females	61	15.1%
Marital Status	Single	100	24.8%
	Married	298	73.8%
	Others	6	1.5%
Age	20-29	15	3.7%
	30-39	102	25.2%
	40-49	133	32.9%
	50-59	145	35.9%
	60 and above	9	2.2%
Experience	0-5	18	4.5%
	6-10	189	46.8%
	11-15	166	41.1%
	15-20	20	5%
	20 and above	11	2.7%
Educational qualification	Master	35	8.7%
	PhD	369	91.3%
Academic rank	Lecturer	35	8.7%
	Assistant Prof	189	46.8%
	Assoc. Prof	136	33.7%
	Prof	44	10.9%
Total		404	100%

Data Analysis and Results
Confirmatory Factor Analysis (CFA)
Confirmatory Factor Analysis (CFA) is a crucial validation procedure utilized to assess the suitability of the measurement model employed in the research (Harrington, 2009). This analysis involves determining the number of components, identifying which items reflect each component, and examining the correlations between these components (Thompson, 2004). Prior to employing Structural Equation Modeling (SEM) for all latent constructs, CFA is conducted (Shih-I, 2011; Awang, 2011, 2012, 2014, 2015). However, it's important to note that Thompson (2004) argued that conducting CFA without theoretical underpinnings is not feasible, as the analysis is directly dependent on the theory and the level of model fit, which can be assessed in various ways. As suggested by Chua (2009), CFA is instrumental in validating convergent and discriminant validity following Exploratory Factor Analysis (EFA).
CFA can be performed in two ways: Individual CFA or Pooled CFA. This study opted for Pooled CFA due to its ease, efficiency, and time-saving nature compared to Individual CFA, as it simultaneously analyzes all latent variables (Chong, Nazim, & Ahmad, 2014; Awang, 2011, 2012, 2014, 2015). Combining constructs in Pooled CFA increases degrees of freedom (Awang, 2011, 2012, 2014, 2015) and helps mitigate identification problems when a construct comprises fewer than four elements (Safiih & Azreen, 2016; Nazim & Ahmad, 2013; Jöreskog, 1978). Wang et al (2015) suggest that a reflective measurement model should ideally include at least three indicators for each component.

Validity

In the measurement model, three distinct types of validity must be assessed: construct validity, convergent validity, and discriminant validity. Each type serves a unique purpose and must be established before advancing to structural equation modeling (Henseler etal., 2014; Ringle et al., 2012; Lehmann, 1988).

Construct Validity

Construct validity pertains to the degree to which the observed items accurately represent the latent construct (Hair et al., 2010). It signifies the precision of measurement. Confirmatory factor analysis assesses the validity of the construct by examining fit indices, including chi-square ($\chi2$), normed chi-square (with an acceptable range of $3.0 \leq \chi2/df \leq 5.0$) (Schumacker & Lomax, 2004), and goodness of fit. Fit indices fall into three categories: absolute fit, incremental fit, and parsimonious fit (Awang, 2011, 2012, 2014, 2015). Absolute fit indices encompass chi-square ($\chi2$), goodness-of-fit index (GFI), and Root-Mean-Square Error of Approximation (RMSEA). A GFI value above 0.9 is recommended (Garson, 2011; Hair et al., 2010). RMSEA values below 0.8 are suggested (Kenny, 2015; Hair et al., 2010; Byrne, 2010). Incremental fit includes comparative fit index (CFI), normed fit index (NFI), incremental fit index (IFI), and Tucker-Lewis coefficient (TLI). CFI values above 0.9 are preferred, with values approaching 1 considered acceptable (Garson, 2011; Hair et al., 2010). NFI values should exceed 0.9 Hair et al (2010), while IFI values should be 0.90 and above (Bentler & Bonett, 1980; Garson, 2011). TLI values above 0.90 are adequate (Kenny, 2015; Hair et al., 2010). Parsimonious fit includes PNFI and PCFI, with values of 0.5 and below considered acceptable (Meyers et al., 2006). Additionally, Chisq/df falls under parsimonious fit, with at least one fitness index recommended in each category (Hair et al., 2010). Utilizing all these indices ensures the suitability of the SEM model for empirical analysis (Kline, 2010; Wahid, Ahmad, & Abdul Kader, 2010).

Convergent Validity

Convergent validity entails assessing the correspondence between the latent variable and its constituent items (Wang, French, & Clay, 2015; Smith & Li, 2010). Hair et al (2010) outline various methods for evaluating convergent validity, including examining the loading factor, where standardized loading estimates should be 0.5 or higher.

Furthermore, convergent validity can be evaluated through the Average Variance Extracted (AVE) for each construct (Awang, 2011, 2012, 2014, 2015; Hair et al., 2010). AVE values should equal or exceed 0.5 to meet the criteria for convergent validity (Awang, 2011, 2012, 2014, 2015; Hair et al., 2010). Additionally, the Critical Ratios (CR) of items can be utilized to assess convergent validity (Smith & Li, 2010). A CR value greater than 1.96 (at a significance level of 0.05) indicates statistical significance (Arbuckle, 2007).

Discriminant Validity

Discriminant validity involves assessing the distinction between the latent variable and other latent variables (Wang et al., 2015; Shih-I, 2011; Smith & Li, 2010; Hair et al., 2010). According to Awang (2015), two conditions must be met to ensure validity: first, the measurement model should not contain redundant items, and second, the correlation between exogenous variables should not exceed 0.85. To meet this criterion, the Average Variance Extracted (AVE) for each construct should be compared with its squared correlation in the model (Henseler et al., 2014).

Reliability

To ensure the reliability of the instrument measuring Green Human Resource Management Practices, Academic Citizenship Behavior, and Organizational Environmental Performance in this study, a reliability analysis of the instrument was conducted. Three criteria were employed to assess reliability: Factor loading, Composite Reliability (CR), and Average Variance Extracted (AVE).

Given that this research utilized AMOS for Structural Equation Modeling, the reliability analysis focused on Composite Reliability (CR) and Average Variance Extracted (AVE). CR values exceeding 0.6 and AVE values surpassing 0.5 are considered satisfactory benchmarks (Awang, 2015). Additionally, Construct Reliability (CR) is commonly considered, with Hair et al. (2010) suggesting that reliability values of 0.7 and above indicate good reliability; however, values between 0.6 and 0.7 are still deemed acceptable.

Table 2 showed that the fitness indexes assessment for the measurement model.

Table 2
The Fitness Indexes assessment for the measurement model

Model Fit Indices	Value	Recommended value	Comments
X^2/df	3.353	< 5.00	The required level is achieved
Comparative fit index (CFI)	0894	> 0.90	The required level is achieved
Root Mean Squared Error of Approximation (RMSEA)	0.076	< 0.080	The required level is achieved
Goodness-of-Fit (GFI)	0.902	> 0.90	The required level is achieved
Tucker–Lewis index (TLI)	0.932	> 0.90	The required level is achieved

Once the fitness indexes have been accepted, the Average Variance Extracted (AVE) and Composite Reliability (CR) must be assessed to determine convergent validity and reliability. While CR has a minimum threshold of 0.6, AVE requires a minimum value of 0.5. The results indicate that each concept and item within the measurement model met the required criteria, suggesting that all components depicted in Figure 4.2 are suitable for further examination. Table 3 offers a comprehensive overview of the AVE and CR values for all elements within the dimensions.

Table 3
CFA Results for the Measurement Model for all the
Items in the Sub-Constructs

Variable	Item	Factor loading	AVE	Composite reliability
Green Training and Development	GTD1	0.8		
	GTD2	0.781		
	GTD3	0.778		
	GTD4	0.934		
	GTD5	0.712	0.595	0.946
	GTD6	0.725		
	GTD7	0.69		

	GTD8	0.932		
	GTD9	0.781		
	GTD10	0.706		
	GTD11	0.651		
	GTD12	0.707		
Green Performance Management	GPM1	0.851	0.952	0.952
	GPM2	0.769		
	GPM3	0.965		
	GPM4	0.869		
	GPM5	0.857		
	GPM6	0.837		
	GPM7	0.855		
Academic citizenship behavior	ACB1	0.791	0.928	0.653
	ACB2	0.829		
	ACB3	0.942		
	ACB4	0.867		
	ACB5	0.913		
	ACB7	0.628		
	ACB9	0.624		
Organization Environmental Performance	OEP1	0.798	0.603	0.937
	OEP3	0.727		
	OEP4	0.601		
	OEP5	0.763		
	OEP6	0.814		
	OEP7	0.755		
	OEP8	0.878		
	OEP10	0.89		
	OEP11	0.604		
	OEP12	0.875		

The discriminant validity index values for each construct in the model are presented in Table 6. As shown in Table 4, all components within the model have achieved discriminant validity, as evidenced by the higher values along the diagonal compared to those in the rows and columns (Awang, 2011, 2012, 2014, 2015). This indicates that multicollinearity is not a concern within the model. With the Confirmatory Factor Analysis model deemed acceptable, the Structural Equation Modelling can proceed once all prerequisites for evaluating Unidimensionality, Validity, and Reliability of the Measurement Model are met.

Table 4
Discriminant Validity Index Summary for the
Construct

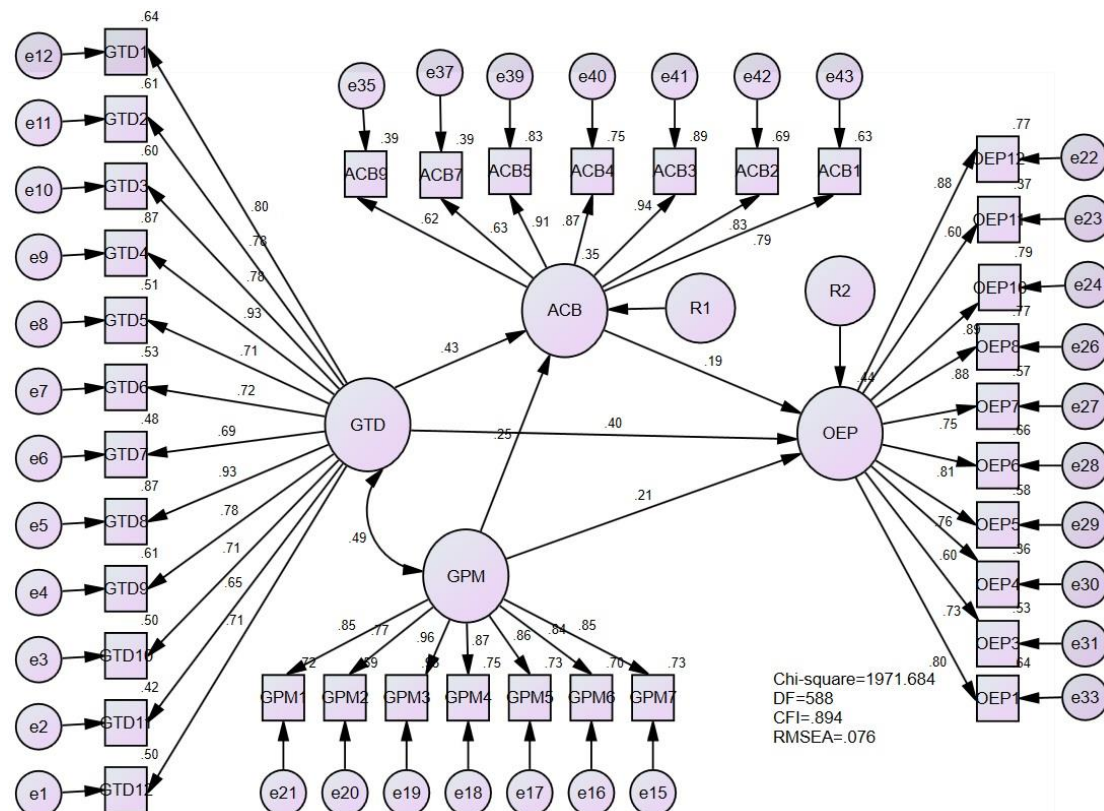|	Green Training and Development	Green Performance Management	Organization Environmental Performance	Academic citizenship behavior
Green Training and Development	**0.771**			
Green Performance Management	0.492	**0.859**		
Organization Environmental Performance	0.609	0.493	**0.777**	
Academic citizenship behavior	0.552	0.463	0.507	**0.808**

Figure 1: The Structural Equation Modelling (SEM)

Hypotheses Testing

Several conditions must be met to analyze the mediating role in the relationship between independent and dependent variables. These conditions encompass both the direct relationship between the independent and dependent variables and the indirect relationship

mediated by the mediator variable (Awang, 2014; 2015). The mediation effect becomes relevant only when the direct effect is statistically significant. If the direct effect of the independent variable on the dependent variable diminishes while the indirect effect via the mediator remains significant, the mediator plays an indirect mediating role in the relationship.

To calculate the indirect effects, the bootstrapping procedure was executed 2000 times, generating 90% confidence intervals. Statistical significance for the mediating effect is determined when the lower and upper confidence intervals exclude zero (Preacher & Hayes, 2008). Figure 3 illustrates the results of the path analysis for hypothesis testing using bootstrapping.
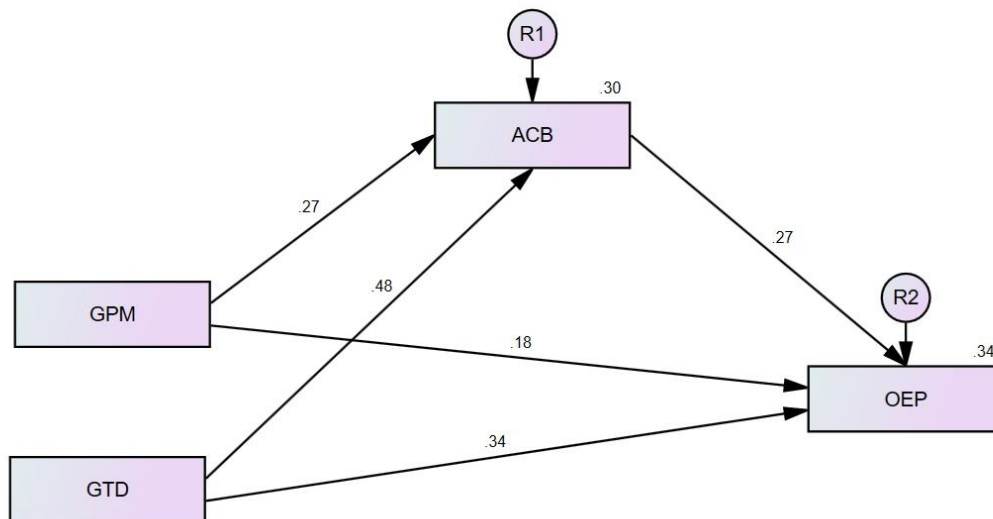

Figure 1: Path analysis results for Hypothesis

According to Table 5, the empirical results supported the existence of a statistical significance of the direct effect between green training and development and academic citizenship behavior, as the results were (Estimate = 0.254, p = 0.000); also the direct effect between green performance management and academic citizenship behavior as the results were (Estimate = 0.174, p = 0.000); other effects between academic citizenship behavior and organization environmental performance as the results were (Estimate = 0.268, p = 0.000); table 5 shows also the positive significant effect between green training and development and organization environmental performance as the results were (Estimate = 0.339, p = 0.000); and significant effect between green performance management and organization environmental performance as the results were (Estimate = 0.204, p = 0.000).

Table 5
Results of hypotheses testing (Direct Effect)

H				Estimate	S.E.	C.R.	P	Label
H1	ACB	<---	GTD	.254	.036	7.105	***	par_31
H2	ACB	<---	GPM	.174	.036	4.813	***	par_34
H3	OEP	<---	ACB	.268	.074	3.601	***	par_32
H4	OEP	<---	GTD	.339	.047	7.146	***	par_33
H5	OEP	<---	GPM	.204	.048	4.262	***	par_35

According to Table 6, the empirical results supported the existence of a statistical significance of the indirect effect of academic citizenship behavior in the relationship between green training and development and organization environmental performance, as the results were (Estimate = .109, p = 0.001), and the confidence intervals did not include zero (lower = 0.078, upper = 0.190) This confirms the existence of statistical significance for this effect.

And the empirical results supported the existence of a statistical significance of the indirect effect of academic citizenship behavior in the relationship between green performance management and organization environmental performance, as the results were (Estimate = .062, p = 0.001), and the confidence intervals did not include zero (lower = 0.038, upper = 0.119) This confirms the existence of statistical significance for this effect.

Table 6
Results of hypotheses testing (Indirect Effects)

H	Indirect			Estimate	Upper	Lower	P
H6	OEP	<---	GT&D	.109	.190	.078	.001
H7	OEP	<---	GPM	.062	.119	.038	.001

Table 7
The Results of Hypothesis Analysis

	Hypothesis	Estimate	Result	Analysis
H1	Green performance management at Government Universities are positive effect on an organization environmental performance.	.204	Accepted	SEM
H2	Green training and development at Government Universities are a positively effect on an organization environmental performance.	.339	Accepted	SEM
H3	Green performance management at Government Universities are positively effect on academic citizenship behavior.	.174	Accepted	SEM

H4	Green training and development at Government Universities are positively effect on an academic citizenship behavior.	.254	Accepted	SEM
H5	Academic citizenship behavior at Government Universities are positively effect on organization environmental performance.	.210	Accepted	SEM
H6	Academic citizenship behavior mediates the effect positively between green performance management on organization environmental performance.	.062	Accepted	SEM
H7	Academic citizenship behavior mediates the effect positively between green training and development on organization environmental performance.	.109	Accepted	SEM

Conclusions, Implications, Limitations and Further Research

Over the last decade, Jordan's university sector has emerged as a pivotal industry. Aligning with previous studies, the current research underscores a significant correlation between green human resource management (GHRM), academic civic engagement, and organizational environmental performance within Jordan's public institutions. These findings affirm that fostering a robust level of environmental training, development, and recruitment can effectively enhance an organization's environmental performance. Moreover, the proficient implementation of GHRM practices stimulates student civic engagement, thereby bolstering the company's environmental performance.

For future investigations, it is recommended to explore additional GHRM practices, particularly those centered on employee development, to yield more comprehensive and valuable insights. Employing alternative sampling approaches, such as a simple random sampling strategy, could enhance the robustness of findings compared to the convenience sampling method utilized in this study. Furthermore, as this study was conducted exclusively in Jordan, caution should be exercised when generalizing its findings to other geographical regions. Subsequent research endeavors could replicate this study in other developing nations across the Middle East to broaden the scope of understanding.

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