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Visualization for the Transformation of Saudi Universities to Green Human Resource Management

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Abstract: This study aims to develop a visualization for the complete transformation of Saudi universities to Green Human Resource Management (GHRM) by identifying possible requirements and challenges. The qualitative methodology was applied by interviewing deans and counselors of human resources units in some Saudi universities. The requirements have been classified into a) general requirements related to policies and orientations of the Saudi Ministry of Education and b) special requirements related to the green human resources dimensions, including recruitment and selection, training and development, performance evaluation, and green reward and compensation. The challenges were categorized into organizational, human, financial, and technical.

Keywords: Green Human Resource Management; Universities; visualization

1. Introduction

Human resources are the main driver of development, and with the world changing rapidly and new trends emerging regularly, sustainable development has become critical because it connects issues of global, economic, and social responsibility [1)].

The United Nations, represented by UNESCO [2)], announced its initiative (Education for Sustainable Development), aimed at disseminating sustainable development practices among employees in the field of education and encouraging behavioral changes that enable the establishment of more sustainable societies [2)].

As a result, governments have recently focused their attention on environmental practices as a model of Human Resources in educational institutions in general, universities in particular, and the world as a whole [3)]. This is true due to the increasing consumption of non-renewable resources, the growing population, and the accelerating industrial and economic pace that create pollution and have negative impacts on the environment [4)]. Many organizations have incorporated sustainability as a goal to maintain a balance between performance aspects and environmental concerns [5)]. As development orientations have changed significantly in recent times to be based on the concepts of sustainability and the green economy, all state institutions should collaborate to encourage and achieve sustainability [6)]. This is to establish the role of sustainable development in satisfying the demands of present and future generations [7)].

The roots of this interest can be traced back to the late nineteenth century, in 1972, when Stockholm highlighted the importance of practices that enhance environmental sustainability in universities. As a result, in 1990, more than 350 universities signed a ten-point action plan to integrate sustainability and environmental culture into teaching, research, operations, and awareness in colleges and universities [8)].

This integration of environmental practices into Human Resources remained nameless until the term "(GHRM) Green Human Resource Management" was coined by Renwick et al., [9)] following the inclusion of these practices in the research agendas of Human Resource Management established by aligning HRM practices to environmental management goals, including green recruitment and selection, green training, and green performance evaluation [10)].

GHRM is one of the branches of green management meant to reveal the role of human behavior in environmental management and sustainability. GHRM reflects the policies and practices set by the universities to achieve a systematic and planned alignment of human resource management practices with their environmental goals [11)] by modifying traditional human resources activities to be an approach for reducing environmental encroachment, allowing employees to present and participate in green ideas, and implementing green initiatives such as greening the workplace, reducing the cost of paper, and rationalizing water and electricity [12)].

The importance of activating GHRM in universities stems from its effective role in encouraging the sustainable use of resources within universities. It also promotes the issue of protecting the environment, raises the employee's awareness of the concept of environmental sustainability, and helps them find creative solutions to

environmental problems. GHRM gives the university a positive image among beneficiaries while achieving sustainable returns. It raises the quality of services and reduces costs much more than its counterparts [13]. This was agreed by the study of Al-Sakafi et al., [14], which showed that the implementation of GHRM practices increases employees' activity and accordingly rationalizes expenditure and increases productivity. Hosain et al., [15] stated that adopting GHRM practices makes employees environmentally conscious and friendly and, therefore good citizens from an environmental perspective.

Ercantan and Eyupoglu [16] also confirmed this idea, stating that human resources management played an important role in maintaining GHRM practices and policies, as well as its role in recruiting new employees more aware of environmental practices through support, empowerment, and staff motivation. Human resources management also plays an important role in the institution's sustainability.

Many studies have discussed human resources management, including studies by Shahriari, et al., [17] Chaudhary [18]; Hosain et al., [15]; Ercantan and Eyupoglu [16]; Shahriari et al., [19]; Al-Sawy and Al-Dabbagh [20], which emphasized the necessity to include a sustainability dimension in human resources due to its direct impact on the behavior of workers in institutions.

Many studies, including Sharp [21], hinted that many universities are attempting to turn green, but these attempts are still scattered and unorganized, as agreed by the study of Shahriari et al., [19] which showed that the environment of each university and its own economic, social, political, and cultural position determine the nature of the dimensions associated with the GHRM, as the orientation and obstacles vary from one university to another. Each university needs its green model compliant with its regulations.

The Kingdom of Saudi Arabia is working tirelessly to transform into a green economy. It held the Middle East Green Initiative Summit in October 2021. One of the summit's most important activities was the National Program for Loss and Waste Reduction, which aims to reduce the rate of loss and waste by 50% by 2030.

The “Green” concept is modern in the Kingdom of Saudi Arabia; therefore, this study aims to provide a visualization for implementing Green Human Resources Management in universities by identifying the most important requirements and challenges it faces.

Research aims:

The research seeks to achieve the following objectives:

1) Identifying the requirements for the transformation toward GHRM in Saudi universities.
2) Identifying the challenges that prevent the shift towards GHRM in Saudi universities.
3) Building a proposed vision for the shift towards GHRM in Saudi universities.

Search limitations:

The current research is defined by its topic, which is visualization for the Transformation of Saudi Universities to Green Human Resource Management, and the research community, which is the deans of human resources in Saudi universities, and the tools used in the research, as well as the time in which the research was conducted, which is the academic year 2023. From this standpoint, the validity of this research and the possibility of generalizing it are linked to the aforementioned limits.

2. Theoretical Framework

2.1 Green Universities

Universities should not only expand their services but also enhance the quality of the services provided to fulfill their essential roles [22]. The educational role of universities extends beyond educational levels to encompass various activities that pave the way for teaching, research, management, planning, design, and construction. This contributes to serving and preserving the community through sustainable practices and procedures [23]. Mu et al., [24] have defined "Green universities" as institutions that incorporate green components into their policies, operations, evaluations, and improvements, treating them as a complex system. This system includes operations such as green campus initiatives, environmentally friendly research, public outreach, collaboration among institutions, green curricula, Green Human Resource Management (GHRM), and sustainability reporting. In this study, we refer to GHRM with its dimensions, including green recruitment and selection, green training and development, green evaluation, and green reward and compensation. These dimensions are detailed as follows:

2.2 Green Human Resource Management

The GHRM concept reflects the role of human resources management practices in promoting sustainable environmental practices and increasing the employee's commitment to environmental sustainability issues [25].

Kim et al., [26] defined GHRM as the environmental plans and policies of senior management, which include training employees to understand new environmental practices, enabling them to engage in environmental activities, and offering them rewards to motivate them to take environmental responsibility.

2.2.1 Green Recruitment and Selection

Opatha et al., [27] defined "green recruitment” as the observance of environmental standards in recruitment notifications related to employee concerns regarding environmental issues.

Shahriari et al., [19] stated that one of the requirements of green recruitment is to prioritize selecting green-oriented people in green universities. Institutions can also choose sample CVs of suitable candidates to download later and print whenever needed. Recruitment tests can also be as

paperless as possible such as behavioral observation, interview, and presentation. Preferences can also be given to candidates who are more environmentally aware and highly motivated to maintain the workspace [15].

2.2.2 Green Training and Development

Green training is the practice that helps employees improve their abilities to preserve and protect the environment and increase environmental awareness [28].

Shahriari et al., [19] underlined that attention must be given to in-service training and integrating green learning into the human resources curriculum. Hosain et al., [15] also noted that the training process should include programs, workshops, and presentations that develop and help employees acquire green management skills. Attention should also be paid to the content of the training in order to increase competencies and skills in managing the environment. Training topics can include many issues such as safety, energy efficiency, waste management, recycling, and reducing the printing of training manuals and booklets, which are the main components of green training.

2.2.3 Green Rewards and Compensation

This refers to a system of financial and non-financial incentives aimed at retaining employees and motivating them to actively contribute to achieving environmental goals [29].

Renwick et al., [9] have suggested several green reward management practices. These include green salary systems, green bonuses, programs aimed at rewarding employees for acquiring green skills, using environmental management rewards (whether cash or in-kind), employing positive rewards in environmental management, personalized reward plans, integrating rewards with promotions, external roles, and daily recognition, promoting managers by supporting employees in environmental management, and utilizing green tax exemptions.

Ercantan and Eyupoglu [16] also emphasized the need to reward employees who show eco-friendly behavior both financially and non-financially to help the institution achieve its green goals.

2.2.4 Green Evaluation

General performance management systems should be developed, and green goals should be added to key performance areas; green performance goals and green behavior indicators should be included in key performance areas (KPI) and key performance indicators (KPA) to evaluate performance at all levels [15]

Shahriari et al., [19] stated that environmentally friendly employees must be identified and assigned to evaluate green performance. A points system must be included in performance appraisals for the green performance of individuals, and end-of-service gratuities.

2.2.5 Levels of GHRM:

1) The individual level: It is represented by (green behavior, green motivation, green knowledge, green personality, green behavior), where we find that many people make decisions and behaviors based on their personal values, based on the managers of organizations, as the main guides and mentors of the organization, to create Personal values among employees are consistent with the goals seeking to enhance green human resources management in the organization, and managers must make decisions with a positive impact, the most important of which is to use all resources wisely in order to achieve sustainable growth for the organization in the field of human resources. and Attention must be paid to knowledge, attitude, motivation and personality about the green trend.
2) Organizational level: This encompasses job descriptions, learning methodologies, organizational structures, planning strategies, and the cultivation of a green organizational culture. The performance of any organization significantly impacts human life within and beyond its boundaries. Consequently, it can serve as a constructive or destructive force. The components of green human resources management at the organizational level are based on job descriptions, learning initiatives, organizational structures, planning methodologies, and fostering a green organizational culture. This culture includes environmental values, symbols, and standards, manifesting in behaviors that profoundly influence the organization's overall culture.
3) The supra-organizational level: (laws and legislation, political orientation, international organizations, the world, civil society organizations). This is represented by the influence of external forces such as green laws and regulations, legislation and government decisions related to sustainable development, political orientation, international organizations, media, non-governmental organizations and organizations Civil society.

2.2.6 Challenges Facing GHRM

The main challenge facing HR professionals is a proper and thorough understanding of the role of GHRM in transforming their institutions into green entities [30].

Hosain et al., [15] also discussed the most significant challenges facing GHRM, which mainly include:

- Different employees' motivations to adopt GHRM practices.
- The long-term and time-consuming process of developing a GHRM culture.
- High investment in the initial stages of GHRM implementation compared to the low return expected.
- The difficulty of recruiting employees and training them on GHRM.
- The difficulty of Green performance evaluation of

employees' behavior.

- The main challenge for HRs is to select and develop future green leaders, create an eco-friendly working structure, prepare green working processes, provide eco-friendly tools, and create green thoughts for their employees.

This is what was agreed upon by Kukreja and Sharma [31], who stressed the difficulty of changing employees' behavior in a short time and the difficulty of motivating all the employees, the huge investments and high costs, and measuring green performance.

To achieve the purpose of the research, this study attempts to answer the following questions:

1. What are the requirements for the transformation toward GHRM in Saudi universities?
2. What are the challenges facing GHRM in Saudi universities?
3. What is the suggested proposal for the transformation of Saudi universities to GHRM?

3. Methodology

The researcher employed the qualitative method, utilizing in-depth interviews for data collection, analysis, and interpretation within a theoretical research strategy grounded in scientific foundations. The fundamental theoretical steps were adhered to, leading to the development of a set of interconnected concepts that offer a comprehensive interpretation of the subject under study within its social context [32].

In-depth interviews were conducted with university leaders in Saudi universities, employing a purely conversational approach to extract detailed insights from them. This method allowed for the acquisition of precise data regarding the beliefs of respondents concerning the requirements and challenges of human resources management in Saudi universities.

The study tools were applied during the academic year 2022/2023, and the interviews spanned a period of two weeks.

This study uses the qualitative approach to collect, analyze, and interpret information using a scientific-based theoretical research strategy. The basic theoretical steps have been followed to develop a set of interconnected concepts, which provide a comprehensive interpretation of the subject under study in the social context [32].

Considered a developmental study, this research aims to visualize the transformation to Green Human Resource Management (GHRM) by identifying the requirements and challenges hindering the process. This is achieved through the interpretative framework of qualitative research, derived from the insights of Saudi Arabian experts in the field of Human Resource Management. These interpretations constitute the proposed framework.

3.1 Study Population and Sampling

The study population comprised university leaders represented by (Deans of Faculty Members and Employees Affairs, Deans of Human Resources, according to the titles in each university, and Advisors of Deputy Rector for Development and Sustainability) in Saudi public universities, because these universities have independent deanships of human resources. We have chosen seven deans of HR, with scientific ranks ranging between (Professor, Associate Professor, and Assistant Professor). The sample was taken by the purposive method, they were carefully selected for this study to ensure that our resources and information come from experts; a description of the sample is provided in the following Table 1.

3.2 Data Collection and Research Tools

The data collection tool employed was a semi-structured interview conducted with university experts well-versed in green initiatives within their respective institutions [35]. Specifically, the areas covered included green recruitment and selection, green training, green rewards and compensation, and green evaluation. The semi-structured format of the interview facilitated a thorough discussion of their views and experiences regarding the subject under study, utilizing an interview tool is a strategic decision in research, as it allows the researcher to explore various perspectives on a specific issue and gather data about participants' attitudes in ways that cannot be achieved through other methods, such as questionnaires or content analysis [34].

Table 1. Characteristics of Interviewees

N	Job Description	Sex	Years of Experience	Degree	Coding
1	Vice Dean of Human Resources	Male	25	Assistant professor	P1
2	Dean of Human Resources	Male	25	Professor	P2
3	Dean of Human Resources	Male	14	Associate professor	P3
4	Dean of Human Resources	Male	17	Associate professor	P4
5	Dean of Human Resources	Male	12	Assistant professor	P5
6	Advisor of Deputy Rector for Development and Sustainability	Female	20	Associate professor	P6
7	Dean of Faculty Members and Employees Affairs	Male	10	Associate professor	P7

The reason for using the semi-structured personal interview tool is its strong structure in formulating questions. During the interviews, the respondents are asked the same questions without alterations, but the questions are formulated to be open-ended. This allows the respondents to provide the desired details in their answers and enables follow-up questions for further clarification and confirmation of the results[35].

The interviews were held online, lasting from 20-40 minutes. To achieve the purpose of this research and to reduce the interview time, the researcher gently brought the interviewees back to the research subject when the conversations got out of context. The interviews were also recorded, with permission from the interviewees, to obtain accurate data and observe the scientific research ethics.

3.3 Reliability of Research

Lincloln and Guba [32] defined reliability in qualitative research as those methods used by the researcher to convince the reader that the research results are trustworthy, quality-driven, and accurate. To ensure reliability Lincloln and Guba [32] identified four criteria, namely:

- **Credibility:** To ensure credibility, before conducting the interviews, the researcher discussed the semi-structured interview questions with several faculty members to get their opinions and recommendations about whether the questions are suitable for the goals of the study, clear, and easy to understand, and then edit the questions according to their recommendations [36].
- **Dependability:** A detailed description of the methodology and methods is useful to evaluate the extent to which suitable research procedures have been followed [37]. To achieve this, the researcher described the steps of the study and tried to record the most accurate details of the procedures used in collecting and analyzing data so that the study could be repeated by following these procedures.
- **Transferability:** It is based on the fact that the study results can be applied to similar cases or contexts [38], so the study sought to provide information about the study context with details that, the researcher believes, are sufficient to judge the possibility of transferring the results to the context of another study.
- **Confirmability:** This term refers to the possibility of proving the study's findings through data [39]. To achieve confirmability, the researcher followed some procedures that can improve the neutrality of the data, the most significant of which were: recording all procedures of the applied study in the form of numbers, presenting the study's findings in a way that makes them explainable by the data and not by the researcher's concepts, and offering examples of the perceptions of the study sample participants quoted from their own words.

3.4 Data Analysis

Thematic Analysis has been used to analyze the qualitative data. In this type of analysis, the data are organized and classified into categories or main themes that help to understand the data and establish a clear meaning for it. It includes six phases followed by the researcher [39], illustrated below.

It should be noted that line-by-line and interview/complete document analysis strategies were adopted by the researcher. All responses were coded using the number of interviews of the study sample participants, which is coded by (P1, P2) to refer to the first and second participant, respectively, and so for the rest of the interviews in order not to lose any part of the code associated with the interviews and documents [40].

3.4.1 Phases of Data Analysis

The steps followed by the researcher have been based on the order mentioned by Braun and Clarke [40], as follows:

Phase I: Data Immersion: The researcher started the analysis process through data immersion, where the researcher conducted the interviews herself, recorded interviews in writing, listened to recordings several times, verified the copies, and identified the data.

Phase II: Generating Initial Codes: The researcher at this phase generated the codes using a descriptive coding method that summarizes the main theme of the qualitative data section in a word or a short phrase using an open inductive coding method [41].

The initial symbols were identified from each interview, in which the participants agreed on the importance of being among the basic elements of green human resources, and they amounted to more than 50 initial symbols [42].

Phase III: Reviewing Codes: The researcher at this phase rereads the sections of each code, combining similar codes together and renaming some of the codes and this is the third phase of the analysis [40]. Table 2 presents the outline of the initial codes of the first interview

Phase IV: Categorizing Codes: In the fourth phase of data analysis, primary codes became secondary codes due to their large number as the researcher continued to describe the phrases of each code to combine similar codes into categories that could achieve the goals of the study. The codes turn into concepts that fall under the categories that refer to them [19], illustrated in Table 3.

Table 2. Initial Codes for Interview

Initial Code	Sample from the Interview Script
Automation	"Replacing printed training materials with electronic materials."
Job Design	"Creating a platform on the website of the Deanship of Human Resources to receive the applicants' CVs and complete the entire process electronically from the beginning until the appointment."
Green Employee	"The green employee's achievements are electronically recorded every month so that his direct supervisor can review them without having to go through paper files."
Green Performance	"Establishing a point system linked to promotions related to voluntary afforestation or green practices."
Green Evaluation	"Performance appraisal is currently paper-based with many formulas. If the decision is made to be replaced by an electronic-based system, this will speed up the appraisal process and support this orientation."

Table 3. Categorizing Codes for Interview

Categories	Concepts	Secondary codes
Green Recruitment and Selection	Recruitment Mechanisms	Selecting green employees, employees possess green practices, and appropriate selection of green employees.
	Job Design	Setting standards that reflect the interest in green human resources, such as voluntary work, close supervision of green features, and employee selection based on green capabilities and not personal contacts.
Green Training and Development	Remote Training	Organizing courses and workshops remotely, providing green knowledge for all university employees, and supporting green program leaders.
	Senior Leadership Training	Creating a green vision by leaders, promoting green practices in employee behavior.
Green Evaluation	Green Performance	Recording monthly achievements electronically, supervising green procedures, and defining green performance standards.
	Evaluation Mechanisms	Promotion is contingent on collecting points in green practices, electronic assessment, and matching implemented practices with targeted green practices.
Green Rewards and Compensation	Employee Compensation	Changing the system of incentives and rewards in universities, the impact of green incentives on the psychology of employees, and electronic certificates.
	Encouraging Green Employees	Motivating employees towards green goals, creating a system of accountability for green underperformance.
Financial Challenges	Transformation Towards Automation	The impact of automating processes on jobs, transforming from prints to electronics.
	Wasting Resources	Reducing costs, saving paper, paperless-based university
Organizational Challenges	Lack of a Competent Green Human Resources Authority	Developing an electronic recruitment platform for all universities
	Policy Gridlock	Integrating the green policy within the university's strategy, containing the phrase "do not print and preserve the environment" in emails.
	Lack of Green Human Resources Handbook	The existence of a green system that supports the implementation, explaining the requirements for the transformation towards green practices.
Human Challenges	Lack of Supportive Leadership	Empowering leaders, lack of awareness of the impact of leadership on employees in implementing green management.
	Resistance to Change	The lack of qualified human cadres, interest in psychological impact, and compatibility of personal goals with green organizational goals.
Technical Challenges	Weak Infrastructure	Difficulty in transforming from paper-based to electronic-based management, and providing high-speed internet, providing backup power stations when the internet is out.

Phase V: Identifying Main Themes: The fifth phase of the analysis is to identify the main themes after verifying that the categories listed under it are a comprehensive and integrated story about the data, described in two sentences [40]. Table 4 illustrates the classification of the nodes into two Main Themes.

Table 4. Main Themes

Main Themes Nodes	Requirements
	Challenges

Phase VI: Producing the Final Report: The researcher produced the final report to explain the results of the analysis of this data, which is reflected in writing and discussing the research results. The purpose of this report is to provide a clear story of research data based on analysis, which aims to build good discussions that answer research questions. The names of the nodes have been amended several times and are sub-categories listed under the two main themes until they came out in the form that the researcher produced and helped her to write and interpret the results [40]. Table 5 below shows all the Main Themes and Nodes, which are subcategories that fall under the main themes modified later while writing the results.

Table 5. All Themes and Nodes

Main Themes	Subcategories (Nodes)
Green Recruitment and Selection	**Requirements**
Green Training and Development	
Green Rewards and Compensation	
Green Evaluation	
Financial Challenges	
Organizational Challenges	**Challenges**
Human Challenges	
Technical Challenges	

4. Discussion of Results

The data analysis and coding process revealed two main types of requirements that support the transformation to GHRM: general requirements and special requirements. The analysis process also revealed several links between the requirements for transformation and the challenges that prevent it. These links may help support the interpretation of the results by trying to understand the causes of failing to fulfill the requirements rather than just identifying them; this is discussed below to answer the research questions.

4.1 What are the requirements for the transformation to GHRM in Saudi universities?

Most of the participants agreed that there are general and special requirements for the transformation to Human Resource Management in Saudi universities. For general requirements, they all agreed that the most important requirement is the senior management support represented by the Ministry of Education, which is primarily responsible for the systems of Saudi universities. For example, P1 said, ***"Supporting and adopting management, so to speak, is the milestone of this orientation." P2 and P5 also said, "The need to create a green vision by leaders, promoting green practices in employee behavior."***

This may be due to the green human resources department's keenness to encourage workers to ensure that their outputs are consistent with the organization's directions. and The performance process for workers requires managers to assume their responsibilities. and many requirements integrate standards related to the transition to human resources management in Saudi universities, this can be done by encouraging a culture of learning about management, using performance standards, developing green information systems and auditing to obtain useful data on administrative performance.

When this result is compared with the efforts of the researchers and the results of their recommendations about the most prominent requirements for the transformation of Green Human Resources, this result clearly agrees with Shahriari et al., [19] who stated that one of the factors affecting GHRM is the support of managers, and the need for them to adopt a green vision supports Green Human Resources. They also stressed the need to have green models for universities derived from the state's policies and its economic and social nature. This confirms the need for senior management support represented by the state and its policies.

P1, P2, P3, P6, and P7 all agreed on the importance of coordination between the various state authorities to achieve the transformation to GHRM in all sectors, particularly universities. For example, P3 said, ***"The corresponding authorities and institutions must have the same implementation procedures."***

When this result is compared with the study of Wahiba [6], the need for this requirement to support transformation is confirmed, as the results of her study revealed the need for concerted efforts between all state institutions to achieve and encourage sustainability.

This can be achieved by issuing consolidated handbooks for the mechanisms of activating the green orientation in all dimensions of human resources. All the participants agreed on the need to have a unit for Green Human Resources in each university with clear and regulated mechanisms. Their statements agreed with what P1 said, ***"The necessity of having a support system for the implementation, as it is said that the institution succeeds with a successful system, and fails with a failed***

system, regardless of its successful employees."

When this result is compared with related studies, a number of the researchers, including Chaudhary [18]; Hosain et al., [15]; Ercantan and Eyupoglu [16]; Shahriari et al.,[19]; Al-Sawy and Al-Dabbagh [20], clearly agreed and emphasized the necessity to include a sustainability dimension in human resources handbooks to ensure the transformation to GHRM and Environmental Sustainability.

P3 and P7 also mentioned the necessity of activating the administration. Empowerment of leaders and granting powers to transform toward GHRM. Both of them indicated this by saying, ***"Give me the authority, give me the full power, and give me the empowerment."***

This is because when senior management adopts the application of administrative empowerment, it will be effective for their work according to their skills and abilities, enhance self-confidence, and give them more space to use their intelligence and experience, which facilitates the process of making decisions and solving problems they face at work, achieving job satisfaction, greater motivation and job commitment, and it also helps Workers gain a greater perception of accomplishment in their work, in addition to reducing the burden on managers and superiors at higher administrative levels, reducing review and direct supervision of subordinates, alleviating work pressures, increasing their self-confidence, encouraging them to be creative, developing their sense of responsibility, and enhancing their organizational loyalty.

When this result is compared with what was reported in Bou Qadi [43], it becomes clear that this requirement must be met. She mentioned that empowering employees is a necessity to increase production efficiency and allows the organization to invest the maximum energies of its employees to obtain more services in the interest of product quality and cost rationalization. It also agrees with Ercantan and Eyupoglu [16], who stated that human resource management plays an important role in recruiting new employees more aware of environmental practices by supporting, empowering, and encouraging employees.

The researcher believes that these requirements include and belong to green human resources management practices because of their importance in preserving the work environment in particular, and because of their important role in management in general, from this standpoint, they lead to reducing costs and increasing productivity in organizations, and improving the work environment for employees, and helping in the process of attracting employees.

This is for the general requirements, as for the special requirements or the requirements related to the dimensions of GHRM, illustrated in the following section.

4.1.1 Green Recruitment and Selection Requirements

The results of the interviews showed the importance of updating job descriptions, clarifying all their requirements, and setting up special mechanisms for recruitment. They also revealed the necessity of automating administrative processes adopting them in green recruitment processes, and leaving away traditional methods that are not supportive of the environment as much as possible. (P3, P5, and P7) mentioned this by saying that the most important requirements for green recruitment and selection are "selecting green employees, employees possessing green practices, appropriate identification of green employees, selecting the employee based on his green capabilities, not personal contacts."

This may also be due to the fact that selecting effective competencies in green recruitment processes is one of the most important approaches to developing university education, due to its importance in creating the appropriate climate to achieve the goals that the university seeks, as recruiters assume responsibility for strengthening the academic culture of the university, consolidating its values, spreading its vision and working hard to achieve her message.

This result agrees with the result of Shahriari et al., [19], who stated the importance of setting mechanisms for selecting a green-oriented employee and transforming to automating the recruiting processes, like making the recruitment tests as much as electronic-based as possible.

4.1.2 Green Training and Development Requirements

Remote training has attracted more attention in recent years [44]. The results of the interviews showed the need to transform remote training as one of the most important practices of green human resources and to use electronic materials as a supportive alternative to green transformation. Most of the participants (P1, P4, P5, and P7) explained: "Organizing courses and workshops remotely, creating green knowledge for all university employees, supporting green program leaders, replacing printed training materials with electronic materials, and studying the training needs that serve green side for each job."

This is linked to the process of providing continuous and regular training in order to learn new skills. The organization should provide an ambitious system for developing employees in order to provide them with the necessary knowledge and skills such as decision-making skills, conflict resolution skills, and leadership skills. Training efforts enable employees to build knowledge, skills, and abilities, not only to perform their jobs, but also to learn the skills and economics of organizations that adopt practices of GHRM. This goes with the results of Hosain et al., [15], who emphasized the necessity to increase interest in the training content and its implementation mechanisms to develop competencies and skills in environmental management.

4.1.3 Green Evaluation Requirements

The results of the interviews on this requirement showed the importance of making promotions contingent

on green practices and the need to include green initiatives in the evaluation system as a dimension of the evaluation, including the electronic recording of monthly achievements in the evaluation mechanisms, supervising green procedures, and the identification of green performance standards, according to what (P1, P3, P4, P5) indicated in the Green Evaluation Mechanisms, by saying "The green employee's achievements are electronically recorded every month so that his direct supervisor can review them without the need to go through paper files, and establishing a point system linked to promotions related to voluntary afforestation or green practices."

This is because the requirements of the performance evaluation system in green human resources management are considered a comprehensive system for evaluating the job performance of employees. and It is a communication process that occurs on an ongoing basis that aims to increase communication and serious discussion between officials and workers in universities, and through it the extent of efficiency in performing the tasks assigned to employees can be determined accurately, and thus knowing the indicators by which the quality of individual performance can be determined, in order to develop performance, which results in developing the university's overall performance.

This is agreed by Hosain et al., [15], who emphasized that the overall performance management systems should be developed, and the green goal should be added to key performance areas; green performance objectives and green behavior indicators should be included in key performance areas (KPI) and key performance indicators (KPA) to evaluate performance at all levels.

4.1.4 Green Rewards and Compensation Requirements

The results showed the importance of changing the system of incentives and rewards in universities and increasing the impact of green incentives on the psychology of employees by establishing an employee compensation system that ensures doubling the points on green practices or intangible incentives, such as permissions, remote working as a reward, flexible attendance system. (P2, P3, P4, and P6) supported this, for example, p4 said, "Employees compensation should be intangibly granted to the outstanding employees with green practices".

This is associated with the system of returns based on performance rather than work, as when the returns are linked to performance, it leads to an increase in the motivation of workers towards achieving the goals and objectives of the organization, by linking their gains to the organization, where creative workers with competence can get rewards that take multiple forms that help them to Achieve high productivity.

When this result is compared to the related studies, we find what proves it. This study agrees with Renwick et al., [9] on the need to adopt many green rewards management practices, such as the green salary system, green bonuses, and programs designed to reward employees for acquiring green skills.

4.2 What are the Challenges Facing the Transformation to GHRM in Saudi Universities?

Data from the interviews were coded and classified to discuss the results of the second research question. The researcher concluded that several challenges are classified into four main categories, namely, organizational, human, financial, and technical, discussed in the following section.

4.2.1 Organizational Challenges

The results of the interviews showed that the most important organizational challenges are the lack of Management dedicated to Green Human Resources, policies gridlock, in addition to the lack of a supporting system for green orientation to ensure its implementation. This confirms what the participants unanimously agreed upon, saying, "The need to create a unit that supports these practices, and to include it within the university's policy, as the implementation will succeed if we consider it an integral part of the organization's goals."

As the change processes within the organization differ according to the form of change, perhaps structural, administrative, or technological, which constitutes the challenge with the greatest impact facing green human resources management, these changes may result in dissatisfaction from some employees and perhaps their attempt to resist this change because of their inability to adapt to it. The real reason behind this may be the lack of skills needed to keep pace with these sudden, radical changes. Therefore, it is necessary in these times for the organization to start planning for change, preparing employees to be more knowledgeable, open, and prepared to receive these innovations. In addition to providing the necessary training that makes them feel confident and able to manage this change and adapt to it positively.

When this result is compared with the efforts of the researchers, it becomes clear that it is necessary when adopting a new orientation to create a unit dictated to it with procedures and regulations that ensure proper implementation [45].

4.2.2 Human Challenges

The human challenges are represented in the results that revealed "The lack of qualified human cadres, and lack of awareness of the impact of leadership on employees in implementing green management." stated by (P2, P3, P6, P7), who referred that the leaders are the basis of any change or transformation toward a new orientation in Business Management. Therefore, attention should be given to this group to qualify them so that they will be the leading driver of his transformation. Abdul-Bar [46] also agrees on that the most important challenge in using any new orientation is the unwillingness and hesitation of

managers because of lack of a clear background for the implementation, lack of time, and excessive administrative burden.

This is because the human resources department faces human challenges, not only in the recruitment process itself, but in choosing the most suitable and most talented person to appoint, and attracting and hiring talented employees. As much as this is a difficult task, and may require many stages of liquidation, it is a strength of the company that makes it confident of its entry. Any competition in the market with human elements that can be relied upon. This requires managing the diversity of the organization's workforce. Having a good percentage of diversity may be a good quality for an organization to flaunt, but from an HR perspective, organizations face challenges in managing this diversity. The organization needs to define a set of organizational values or standards of behavior within the workplace that helps each employee understand his role and behavior in the organization. Adherence to these policies and procedures is essential, and requires the organization to create a flexible, comfortable, and easy-to-follow culture that contains all the different elements in a successful organizational manner.

The results of the interviews showed that the most prominent challenge is HR resistance to change. All participants agreed upon this, saying, "The transformation from one situation to a new one often encounters resistance by individuals." This may be due to the inconsistency of personal goals with green organizational goals. This was agreed by Adeeb et al., [47] that resistance to change is inevitable. Man is an enemy of what he is ignorant of, so he tends to resist fearing the confusion that change may cause, so he needs time to prepare himself for this orientation and increase his desire to participate in it.

4.2.3 Financial Challenges

The financial challenges are represented in the results that showed the tendency of Saudi universities to automate and reduce the waste of resources and the resulting expenditure rationalization and green practices implementation, which requires huge financial support. According to what P5 indicated, "Automation needs a financial injection, which is one of the biggest obstacles."

Providing financial aspects is sometimes difficult to achieve, considering the cost of benefits, training, taxes, and other expenses that the organization is exposed to daily. Financial return is an important element, but it is not always the most important factor for employees. It may be through Establishing an appropriate system to reward employees for their performance and their promotions fairly. In addition to some smart incentive plans, such as sharing a percentage of the company's profits, which may double the employees' determination to succeed and achieve more in an unprecedented way.

This result is compared with the modern orientations of the Kingdom of Saudi Arabia that target all of its institutions, including universities, and consists of what supports the drive by National Program 2020 for Loss and Waste Reduction by 50%, by 2030 [48].

4.2.4 Technical Challenges

The results of the interviews showed that the most prominent technical challenge facing Saudi universities in the transformation to GHRM, as stated by (P1, P4, P5, and P7), is "weak infrastructure," such as the lack of backup power generators, weak and sometimes low-speed internet leading to business disruption, and not providing a computer for each employee in all units and departments.

Technical challenges are coupled with technological developments that require high skills, as office automation continues and the nature of office work changes to suit the digital transformation journey and working conditions, followed by the process of developing skills and continuous learning for the employee's growth and success in the organization, and with the need for rapid growth and progress, it may be difficult. The organization must save the time and money necessary to qualify all employees, so the researcher believes that the solution is to appoint team leaders and managers who can provide the required training to employees via the Internet so that people can move at their own pace and through this, employees obtain the necessary skills economically way. For time and money.

This was agreed by Swaisy [49], who indicated that the biggest challenge standing against technical transformation is the inadequate information infrastructure, and the high economic cost associated with the complete technical transformation of an institution. Another key issue is the need for rationalization to reach sustainability, for example energy conservation is very important as a result of the global energy crisis [50].

4.3 What is the suggested proposal for the transformation of Saudi universities to GHRM?

In discussing the third research question the study found that to achieve a proper activation of the green dimension in universities in general and GHRM in particular, it is necessary to have mechanisms for implementation, as well as achieving the requirements concluded and overcoming the challenges that have been revealed by the results of this study. After discussing the results of the first and second questions of the study, visualization was drafted to help Saudi universities move towards GHRM and properly activate it. The suggested proposal stems from the following points:

- The vision of Saudi Arabia, as sustainability, has always been its milestone; it focused on environmental sustainability as an essential component of development [47].
- The Kingdom encourages the Green Economy through the (green Saudi) initiative in 2021 [51].
- Autonomy of some universities as a primary step for development. The orientation of Saudi

universities to restructuring their programs, makes it easy for them to adopt some policies and mechanisms toward green transformation [52].

This proposal aims establish a mechanism that helps decision-makers in the Ministry of Education to instruct universities to transform to GHRM in the dimensions of HRM and to develop solutions for the challenges that may face universities in their transformation. Therefore, the **mechanisms of this proposal** were as follows:

- Applying for the approval and support of decision-makers in the Kingdom to include the green dimension in the strategies and plans of universities.
- Creating a GHRM Transformation committee in collaboration with The Ministry of Education and the Human Resources Ministry, with the following functions:
  - Understanding the current situation using scientific planning tools
  - Creating units dedicated to implementing the green dimension in universities
  - Updating Human Resources Management systems in universities
  - Establishing a job description that includes green practices.
  - Developing updated conditions for recruitment and selection, training and development, evaluation, rewards, and compensation that include the green dimension.
  - Organizing workshops for university representatives and demonstrating all updates.
  - Tracking and evaluating the operations of universities in implementing GHRM within its procedures.

In light of the current study results, the researcher decided to design this model, which clarifies the requirements (see Fig. 1) that must be met for the transformation to GHRM.

However, this proposal may face many challenges that prevent the transformation to GHRM in Saudi universities, as follows:

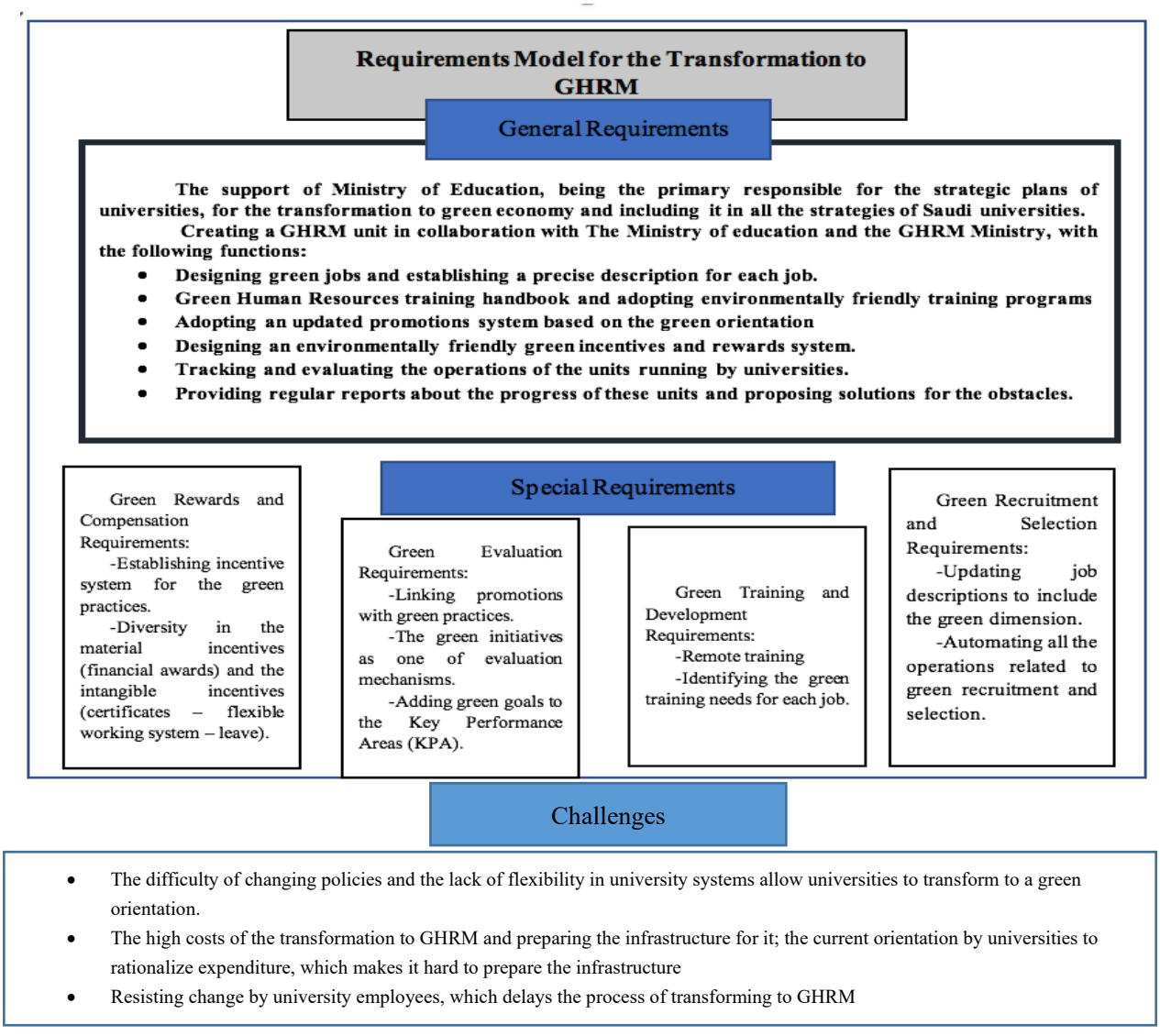

Fig. 1: Requirements Model for the Transformation to GHRM: by the Researcher

- The difficulty of changing policies and the lack of flexibility in university systems allow universities to transform to a green orientation.
- The high costs of the transformation to GHRM and preparing the infrastructure for it; the current orientation by universities to rationalizeexpenditure, which makes it hard to prepare the infrastructure.
- Resisting change by university employees, which delays the process of transforming to GHRM.

Accordingly, the researcher suggested some mechanisms to overcome these challenges, summarized as follows:

- Further field procedures should be taken that show the benefits of this transformation and the drawbacks of delaying it, and learning from the experiences of developed countries in the transformation to GHRM.
- Encouraging universities to transform into productive universities and to search for alternative funding sources to meet the high cost of rebuilding the infrastructure.
- Disseminating the green orientation culture among university employees and establishing a rewarding incentives system to support this orientation.

5. Conclusion

After carefully analyzing all the interviews, coding them, and discussing the results, we concluded that there are general requirements and special requirements, and the most prominent of these requirements is the issuance of unified guides on the mechanisms for activating the green orientation in all dimensions of human resources. It was agreed among all participants on the necessity of having a special unit for green human resources in each sector. University, with clear and codified work mechanisms, as well as the necessity of activating administrative empowerment of leaders and granting powers to shift towards green human resources management. There is also a consensus on the necessity of turning to distance training as one of the most important green human resources practices, and replacing electronic portfolios as a supportive alternative to green transformation. In addition to developing general performance management systems, and adding the green goal in key performance areas. Green performance objectives and green behavior indicators are included in the key areas (KPI) and key performance indicators (KPA) to evaluate performance at all levels.

Many challenges prevent the shift towards green human resources management, which has been classified into four main areas (organizational, human, financial, and technical). The most important organizational challenges were the lack of a department specialized in green human resources, the stagnation of policies, in addition to the lack of a system supporting the green orientation that ensures its implementation. As for the human challenges, the most notable were the lack of availability of qualified human resources, the lack of awareness of the extent of leadership's influence on employees in implementing green management, and resistance to Human resources for change. Implementing the requirements also requires huge financial support, reducing the waste of resources and the resulting rationalization of spending and application of green practices. The most significant technical challenges are the weak readiness of the information infrastructure and the high economic cost associated with the complete technical transformation. It was also concluded that the independence of Saudi universities is a first step for development, and also directs Saudi universities to restructure their programs, which makes it easier for them to modify some policies and mechanisms toward the green transformation.

At the conclusion of this study, the researcher directs researchers and those interested in the field of management and sustainability to conduct future research that studies the impact of green practices in educational and pedagogical institutions on improving the work environment. She also calls on researchers to conduct innovative initiatives that support the shift to managing green resources in universities, in addition to identifying the requirements for implementing the shift towards green universities.

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