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Promoting Employee Ecological Behavior Through Green Initiatives

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ABSTRACT

This qualitative study looked into the initiative and practices of employee ecological behavior (EEB) among academicians. This study examined the design and deployment of green practices that unraveled entrenched, peripheral, and intermediate ecological practices. The field of inquiry involved public universities established in Malaysia. In total, 23 academicians from selected public universities across Malaysia were interviewed. Data pertaining to EEB were gathered via in-depth interviews and focus group discussion sessions. Study participants pointed out several initiatives and practices reflecting their campuses' ecological practices. Green initiatives emerged as a powerful tool that generated EEB among the participants. Exemplars and suggestions for good ecological practices were delineated, such as banking plastics at the cafeterias, adopting green cafeterias, a Car-Free Day, sustainability campaigns, and recycling. The observed practices and initiatives substantially contributed to the green campus, and the outcomes add knowledge regarding how EEB can be encouraged in HEIs.

1. INTRODUCTION

The United Nations outlined a universal set of goals entitled Sustainable Development Goals (SDGs) on September 25, 2015, to eradicate all forms of poverty by 2030 while balancing the three sustainable development dimensions – environment, social, and economic [1]. The environmental dimensions of sustainable development are measured with indices ranging from air quality, water quality, waste management, greenhouse gas emissions, and various ecological indicators [2]. The social dimension was also included, with the widest variation in selecting indicators [2]. A growing number of studies analyze the sustainable development impacts of individual economic activities, helping shed light on their positive and negative SDG impacts [3]. The economic dimension is generally measured by capital income, including income distribution and public debt [2]. According to van Zanten and van Tulder [3], economic growth is a double-edged sword for sustainable development. These SDGs focus on transforming the world through economic prosperity, the development of exceptional human well-being, and conservation of the environment [4].

In Malaysia, the government has devised several policies in line with its Eleventh Malaysia Plan that reflect the universal SDGs towards attaining sustainable development [5]. One of the many policies formulated in Malaysia practiced since 2000 is the Local Agenda 21 or LA 21. It is crucial to identify how the Malaysian local authorities decipher sustainable development, especially in deploying the related sustainable activities [6]. Upon discussing the SDGs from the social work practice stance, SDGs offer social workers a comprehensive framework embedded with new opportunities and challenges to put into practice effectively [5].

The 15 Key Economic Growth Activities (KEGA), which is part of Malaysia's Shared Prosperity Vision 2030, focus on improving the pay scale of the low-income group [6]. The KEGA denotes future economic activities that generate rapid progress on par with the national aspiration to become a high-income country [7]. The focus of KEGA is narrowed towards smart agriculture, maritime and coastal economy, green economy, the hub of excellence, and renewable energy [8]. The performance of KEGA activities is enhanced over time, and an evaluation process is conducted to ensure the sustainability and competitiveness of each activity (Shared Prosperity Vision 2030, n.d).

Several environmental issues have garnered much attention, including biodiversity loss, climate changes, degrading ecosystems, depleting the ozone layer, and deforestation [9]. The emission of carbon dioxide, the plundering of virgin forests, and the burning of fossil fuel have led to the dire situation in the environment to date, all stemming from human activities [10]. As a result, numerous organizations have begun adopting daily practices that produce less harm to the environment by implementing green initiatives or deploying environmental management systems (EMS) [11].

In Malaysia, sustainable development was initiated when a work program was established by the Institute for Environment and Development (LESTARI) for its inaugural year in 1995 [12]. LESTARI had initiated numerous sustainable development activities in the interest of the Malaysian government, in combination with other multilateral organizations, such as the Pacific of the United Nations, Asian Development Bank, and Economic and Social Council for Asia.

In response to this, one of the biggest challenges higher education institutions (HEIs) face is fostering sustainability, peace, and cooperation in safeguarding human rights [13]. Hence, many educational organizations have taken measures

to ascertain that their day-to-day operations do not degrade the environment via green practices or EMS, such as recycling materials and minimizing carbon print (e.g., saving more on electricity and not wasting office materials) [10].

HEIs resemble smaller cities regarding urban characteristics and population size [14]. Sustainability in the higher education segment is dominated by practical "greening the campus" initiatives. Establishing a green campus is essential for sustainable development made viable through several practical and theoretical possibilities [15]. Essentially, green initiatives offer significant support to employee ecological behavior (EEB). Tiyarattanachai and Hollmann [16] asserted that universities should implement the criteria set for UI Green Metric World University Ranking to attain sustainability.

According to Li et al. [17], green initiatives comprise a set of actions undertaken by a firm to minimize the adverse environmental effects associated with the entire life cycle of its products or services, starting from the design of the product, acquisition of raw materials and product use up to the final disposal of the product. Meanwhile, Martín-de Castro et al. [18] define EMS as "systems of management processes that enable organizations to continually reduce their impact to the natural environment, requiring the assessment of their environmental impacts, establishing goals, implementing environmental goals, monitoring goal attainment, and undergoing management review."

Although some firms may become environmentally proactive in anticipation of more efficient utilization of resources and improved reputation, many firms are reluctant to take a more aggressive and proactive approach to environmental initiatives due to a perceived lack of evidence that the benefits exceed the costs of pursuing these initiatives. In this sense, pollution can be considered a form of economic waste and a sign of production inefficiencies. Therefore, firms that effectively implement EMS could drive down costs by reducing the emission of pollutants and optimizing production factors [18].

The remainder of this paper is the following: Section 2 describes the theoretical background of EEB. Sections 3 and 4 present the research methodology and findings, respectively. This study's discussion, implications, and limitations are delineated in section 5. This study ends with a conclusion in section 6.

2. LITERATURE REVIEW

The Ability-Motivation-Opportunity (AMO) theory is the underlying theory in the present study. According to Fawehinmi et al. [10], the AMO theory upholds the importance of acquiring skills, motivation, and opportunities to make critical decisions in gaining exceptional employee performance. In AMO theory, one can perform well if he or she can do so (acquisition of knowledge and skills), one is motivated to do so (internal and external motivation), and opportunities are present in one's setting (support and amenities) [19]. Past studies relied heavily on Renwick's et al. [20] AMO theory to describe HRM practices that (1) enhance the ability of employees to become high-performing employees, (2) enhance the motivation of employees to become committed via effective performance management and contingent reward, and (3) offer opportunities for employees to actively engage in problem-solving and knowledge-sharing activities via programs.

Rayner and Morgan [19] had initially built the AMO theory to embed knowledge in appreciation, as ability alone cannot offer either motivated or meaningful behavior. In addition, Sibian and Ispas [21] indicate that when environmentally responsible behavior becomes a habit, it is much more likely for an individual to take the initiative and repeat this behavior in various forms, thus leading to an increase in the intention to implement environmentally friendly practices in the future. Following the framework of AMO, human resource management practices may influence individuals' discretionary efforts or EEB. Some authors consider that AMO influence on employee's performance is more complicated than expected because it depends not only on the existence of a set of these practices but also on the employee's subjective perceptions of these practices [21].

The AMO theory argues that EEB motivation generates environment-conscious habits to protect nature. At the same time, the opportunity lies in providing communication and amenity systems that support recycling activities and EEB by being pro-environmental. Notably, those at home have better opportunities to engage in EEB. Although practices to motivate and create opportunities for employees are essential, developing their ability is a critical element in influencing organizational citizenship behavior. This influence can be moderated when ability interacts with motivation or opportunity [22]. In the green context, we, therefore, expect to discover the interactive influences of green initiatives and practices (ability and motivation) and employee involvement in activities (ability and opportunity) on EEB improvement; the formula is illustrated as follows: EEB represents the way interactive function involving both the combination of ability and motivation and the combination of ability and opportunity link in HEIs.

2.1 Employee ecological behavior

Employee ecological behavior (EEB) refers to environment-conscious behavior and engagement in green practice to attain competitive advantage in organizations [10, 23, 24]. The EEB, as defined by Safari et al. [9], is responsible environmental behavior that promotes environmental sustainability and environment-friendly attribute. According to Norton et al. [25], EEB is a personal initiative that exceeds organizational expectations. Behavior is the yield of attitude that comes in many forms shaped by someone's intended actions and willingness [26]. Apparently, ecological virtues (e.g., hope and appreciation of excellence) can potentially motivate workers to orient themselves in a positive, behavioral and affective manner towards sustainability [27]. Instances of EEB are preventing wastage, recycling paper, double-sided printing, and saving electricity [28].

Many influential factors of EEB have been identified in prior studies, such as ecological fairs that promote sustainability in universities [15], lifestyle factors that promote ecological behavior among young consumers [23, 29], EEB in the hospitality segment [30], and ecologically-oriented consumers who have displayed favorable attitude and stronger intention to visit locally-sourced restaurants [24]. Meanwhile, the intention to deploy green practices is the willingness of an employee or organization to be environment-friendly or the use of energy-saving appliances to conserve the environment [30]. The AMO theory posits that attitude is a good predictor of corresponding behavior. However, unexpected events or situational demands may not yield expected results. Primarily,

attitude may prevent someone from executing EEB [19].

Past studies have investigated the importance of EEB in varying contexts. For instance, Fawehinmi et al. [10] determined the significance of EEB in Asian countries. They found a strong relationship between green human resource management (HRM) and EEB through environmental knowledge in Malaysian public research universities. Next, Adnan et al. [29] examined the relationship between ecological behavior and lifestyles of young Indian consumers. Besides discovering that environmental concern, knowledge, and awareness influenced EEB, Chan et al. [31] highlighted the importance of EEB in deploying green practices in the hotel industry.

While the literature on EEB from the organizational stance is broad [24, 27, 31, 32], the conceptualization of ecology from the academician perspective is scarce [10]. Adding to that, understanding the fundamental reason why employees engage in EEB at work has become imperative [33]. Thus, this present study assessed EEB across HEIs by identifying the determinants of EEB adoption via green initiatives in Malaysia within the context of a developing country. It is crucial to identify the determinant factors of EEB so that academicians can implement the best ecological practices and for researchers to point out issues that have to be ironed out.

2.2 EEB and green initiative

In response to the local and global issues of green, many organizations adopt green practices as their innovations to be competitive [34]. As Chen et al. [35] defined, green initiatives refer to a set of actions undertaken by organizations to minimize adverse environmental impacts on the product or service life cycle. According to Chaudhary [36], employee involvement in green initiatives deployment and green training can enhance employees' capabilities, knowledge, and skills to engage in green practice psychologically. As Chen et al. [35] indicated, encouraging EEB (e.g., reduction of wastage, recycling, and conservation) contributes to green organizational practices, hinders environmental damage, and exerts a positive impact on climate change. Hence, waste management, recycling, energy-saving, environmental or health safety measures, process redesign for environmental or health safety, green supply chain, paperless, and tree planting might be among the green initiatives organizations adopt these days [34]. According to Iqbal et al. [37], taking the initiative denotes a willingness to comprehend, measure, and influence employee risks in light of environmental benefits. Behavior in this sense refers to initiating the entrepreneurial spirit in employee actions as the locus of a program or an initiative. Thus, such behaviors are essential contributors to corporate environmental performance [38].

According to Stritch and Christensen [39], eco-initiatives reflect encouraging employee participation at an individual level in pro-environmental behavior (PEB) by organizations. Meanwhile, Bissing-olson et al. [40] stated that proactive PEB refers to employees taking the initiative to engage in environment-friendly behavior beyond their jobs cope. Thus, someone who takes the initiative at work functions as a change agent by performing green practices, including improving pollution control measures (hindering harm), minimizing consumption of resources (conservation), and generating green products (sustainability) [41]. Foo [12] asserted that open spaces and greenery are a network of integrated ecological systems for enriching the quality of life of humans,

as well as conserving energy resources, air, microclimate, and water. According to Ahmed et al. [38], employees with greater well-being will perform their work productively, benefiting the organization as employees participate and display green behavior in the workplace.

In this study, the ecological behavior of employees that they display at the workplace to protect the natural environment includes turning off lights, printing on both sides of a page, using stairs rather than elevators, and cleaning the environment [38]. EEB has been described as a workplace-specific form of pro-environmental behavior by researchers in the literature [25, 42]. The term "greening" refers to an environmental management system for the higher education sector [43]. In addition, Iqbal et al. [37] said that proactive PEB is related to initiatives undertaken by workers to perform beyond the job scope for environment sustainability. The approach prescribes several levels of employee involvement in EEB; some merely adhere to their job requirement, while others go beyond by displaying more proactive EEB. Recently, Pereira Ribeiro et al. [43] indicated that university campuses play an essential role in educating future generations on concepts related to sustainability. Figueredo and Tsarenko [44] claimed that EEB is shaped by university programs and policy and environment-enhancing efforts by society.

3. METHODOLOGY

3.1 Procedure and participants

This qualitative, descriptive study involved 23 academicians from five public universities across Malaysia. In-depth interviews and focus group discussion methods were employed to gather data. A purposeful sampling technique was applied and continued until data saturation was attained.

3.2 Data collection

In-depth, structured interviews were conducted to gather data. To elicit in-depth information regarding the participants' experiences, the following open-ended question was posed initially: "What is your understanding of EEB? Follow-up questions included, "Do you practice it voluntarily or because your job duties require it?" and "Do you know of any greening actions performed at the university?"

After the participants had agreed to take part in this study, the interview objectives and questions were emailed to them two weeks before the face-to-face interview sessions were held, thus enabling them to prepare detailed responses. The 60 to 90-minute interview sessions were held between February and August 2020. Upon gaining consent from the participants, all interview sessions were digitally recorded and later transcribed verbatim into a Microsoft Word document. The gathered data were analyzed thematically based on the following process: familiarization, identification of themes, organization of data into the identified themes, and lastly, a comprehensive review.

3.3 Ethical consideration

This study was approved by the Research Ethics Committee in one of the public universities in Malaysia. Before data collection, all participants signed a written informed consent that explained the voluntary nature of the study, the

confidentiality of the gathered data, and that they could opt-out of the study at any point in time. The interview sessions were recorded after seeking permission from the participants.

Table 1. Interview protocol and questions

Interview protocol
Introduce the interviewer(s) and participant(s)
Outline the research process
Outline the purpose of the research, including aims and objectives
Discuss potential research outcomes, ethical issues and obtain consent
Outline structure of the interview/focus group

Research themes and specific questions
1. What is your understanding of EEB?
2. Do you practice it voluntarily or because your job duties require it?
3. What kind of components of daily work practice should be included in EEB? (What daily practices do you perform, according to you, that contribute to protecting nature?) For example, the use of air-conditioning, printing, drinking practices, sustainable shopping, computer use, and light use.

Organization structure concerning the environment and HRM/development function
1. What role, if any, do you feel universities, in general, should play in achieving your EEB?
2. How do sustainability advocates in organizations implement and experience ecological practices to engage employees in green behavior?
3. Is work at your faculty or school carried out according to the principles of sustainability? If so, do you take part in these projects or strategies?

Environmental and HRM and/or development initiatives
1. Do you know of any greening actions at the university level? Would a reward initiative influence you to adopt green practices?
2. Are there any practices that you observe at the university? Have you seen university green action? Are academicians encouraged to involve in green practices?
3. What are the initiatives that the university has provided to support green practices?
4. Can you outline a few initiatives of how your university addresses the issues or challenges associated with EEB?

About you
1. What benefits have you gained from the implementation of EEB? Or how do you see daily EEB could benefit your work?
2. How do you see EEB could benefit your university?

3.4 Data analysis

Data analysis was intended to answer the research questions concerning Employees' understanding of EEB in the universities. These factors encourage EEB in the universities and implement green initiatives in the universities. The study data were collected from both primary and secondary sources based on two methods: face-to-face interviews and focus group discussion sessions. After recording all the data, the transcripts were read by the authors. Next, a descriptive coding process was performed to identify relevant data for this study, which mainly focused on the work and personal experiences of the participants in light of the environmental sustainability domain. Since the authors' involvement was varied throughout the data collection phase, their relationship to the research topic and organization was also varied. After agreeing to the descriptive codes among the team members, interpretative coding was performed to identify a smaller number of codes. As a result, two preliminary themes were determined within the EEB literature. Manual coding and thematic process were carried out. Table 1 lists the overarching themes and interpretive codes. The outcomes were thematically organized to reflect the two overarching themes, which amplified the similarities and variances across the selected HEIs. The participants' responses were applied to portray the identified themes and illustrate their individual experiences at varying HEIs.

4. FINDINGS

This section delineates the study outcomes. The categorized results reflect the initiatives undertaken by the HEIs to apply ecological practices in accordance with the research objectives.

4.1 Profile of the HEIs and the interviewees

The structured interviews were held with academicians from five research universities in Malaysia. Table 2 shows the demographic profile of the respondents.

Table 2. Demographic profile of the respondents

University	No. of Participants	Race				Gender	
		Malay	Chinese	India	Others	Male	Female
A	2	2	-	-	-	-	2
B	4	3	1	-	-	2	2
C	2	2	-	-	-	2	-
D	6	3	1	1	1	3	3
E	9	9	-	-	-	5	3

4.2 Green campus initiatives preliminary investigation

The interview sessions were held in public universities across Malaysia to assess the selected variables from the identified factors (people, place, and process). The following table lists the interview questions devised based on the interview purpose. At the same time, sub-questions were posed depending on the participants' understanding of the questions. Verbatim quotes representative of this theme are as

follows:

4.2.1   General understanding of EEB
Generally, people were pictured as tending towards EEB, incapable of translating moral insight into behavior, and driven by comfort and habit. Some interviewees claimed:
"To me, EEB is about the behavior of employees in an organization that can contribute towards conserving the environment. When we say the word eco, we can picture

something green. And actually, the terms sustainable, eco, and green are used interchangeably to mean conserving nature." [Participant 13, University E]

Participant 56 defined EEB as "the behavior of employees in an organization that contributes to conserving the environment." This view was supported by participants 12 and 13 who experienced similar understanding, whereby their behavior was related to their attitude.

"I think ecological behavior is related to our attitude. As employees, we have our workplace. So, it is about how we interact with our work surroundings. It is about how we interact with our students in the classrooms and other faculties. When we talk about EEB, we are not talking about being green yet, but how we react with our surroundings. In this case, the surrounding is our workplace. People say that the way we react at the workplace and at home is the same. A cleaner told me that when she saw my office, she knew how my house would look like. So, ecological behavior is related to our environment. That is how I see it." [Participant 11, University E].

Participant 12 from University E had the following to say:

"To me, EEB means our attitude towards ecology. If we define ecology, it is something related to the environment. I don't know the Malay equivalent of the word ecology, but it's how you respond to the environment and how you appreciate the environment. I also did research, something similar to this, but we looked at students' behavior. We investigated if they were more involved with the environment in terms of doing extracurricular activities or even formal education or would their appreciation towards the environment would become greater. So, I think the concept is the same as how we respond towards the environment based on our current knowledge and consciousness. We may have the feeling without us needing to have formal education relating to the environment. Some people are naturally attached to the environment and appreciate what's going on around them. [Participant 12, University E]

Some participants described ecological behavior as related to their attitude. Some of these efforts involve leveraging aspects of environmental awareness. For example, the participants described how they respond to the environment and appreciate it. Demonstrating this point, they began to exhibit certain ecological behaviors and developed positive attitudes towards environmental protection. In addition, they improved their environmental awareness and behaved accordingly. In addition, one participant readily spoke about engaging their students to develop their understanding of environmental issues and support new initiatives through doing extracurricular activities or even formal education. The participants believe that they can reach the new generations to make informed decisions about nature by educating the students.

4.2.2 Factors influencing EEB

The selected five universities devised a range of green initiatives to address environmental sustainability issues. The gathered data were analyzed to determine factors that drove their EEB adoption. All participants discussed the initiatives as mentioned above within the context of green practices. Based on the analysis, green initiatives were re-organized factors that led to EEB.

Interestingly, they claimed that their behavior was environment-friendly. The same generic factors described as 'culture' or 'initiative' underpinned their behavior.

"To me, ecological behavior is the culture already present

among employees. Yes, there are efforts and initiatives to encourage people, for example, banking plastics at our cafeterias, adopting green cafeterias, and so forth. Someone mentioned earlier about recycling cages. Ecological behavior is practiced not owing to these encouragements but because it is the culture that has already become part of the employees in the organizations. The behavior is automatic. For example, they will decide to bring their own food containers rather than paper food wrappers from the cafeterias. So, that's my comprehension without using Google." [Participant 13, University E].

The participants viewed themselves as leaders. In order to preserve the environment, proactive EEB was associated with the initiatives taken by employees that are beyond their job scope [37].

".... I am one of the leaders at Lestari. Some examples I can share with you are bringing a coffee mug and going paperless. I think, in doing these green practices, you need to show an example, then people can adopt it [Respondent 9, university A].

Employees enjoyed performing tasks they had never done before and were completely different from their daily routine. As for efforts and initiatives to encourage people, these initiatives were become embedded in the academician's everyday routines. For effective long-term approaches to sustainability, initiatives and strategies need to be genuinely embedded in the organization and its employees. An example from our interviews where a sustainability initiative was implemented through engagement with the leader was demonstrated by bringing a coffee mug and going paperless in the workplace.

4.2.3 Green campus initiatives

The interviews suggested a few initiatives that served as factors leading to EEB. The participants justified the stated initiatives, as given in the following:

"In the university ranking, we are number one in sustainability among city campuses. There are a lot of initiatives that have been taken by the university, especially by our river warriors and water warriors. Water warriors are a group of researchers that conserve the rivers. Instead of throwing plastics into the river, they accumulate them at the center. You can see a lot of improvement at the river in front of the library. They have transformed the area into a garden." [Participant 7, University B].

Some participants contrasted their holistic general understanding of ecological practices with their description of the initiative to change into a green campus based on the details about the universities' activities. For instance, a university had transformed a river into a garden. The other participants support the statement provided by Participant 7. Participant 48 gave more specific details about their strict green initiatives, as given below:

"There have been a lot of initiatives by university E, such as introducing Car-Free Day, sustainability campaigns, and recycling. We have a recycle cage, and we can just put every single thing into this cage, but these things must be separated, plastics together, glasses, and so on. Every Tuesday, the garbage lorry will come and pick them up. I'm aware of that, and it is definitely a good initiative. So, I think this is related to ecological behavior." [Participant 8, University E].

The responses reflect that EEB adoption influenced green initiatives. For example,

"Green document is an initiative from Eco university B. The

project is a collaboration among researchers. The research is focused on sustainability. For example, if they go somewhere and it says that there is no environmental pollution, then it will be developed by the research team. They try to analyze the conservation category. For example, buying a cleaning solution that contains ingredients that do not pollute the environment. [Participant 20, university B].

Some participants highlighted that the green campus initiative is essential in developing higher education sustainability. When participants discussed a general understanding of ecological practices, they appeared to be more personally involved. It seemed that they were personally and individually committed to these initiatives, using the words "we" and "us" when discussing their implementation. Participants' views concerning external initiatives such as introducing Car-Free Day, sustainability campaigns, recycling, and green document, as discussed above, tended to be more concerned and appreciation towards the environment became greater, and implementation was motivated by surroundings such as members in the workplace.

Participant 23 from University C added the following:

"There is no green documentation at university C. It has many initiatives and policies. The activities that involve green practices in the university are based on the semester and each Responsibility Center. We can't access it. The blueprint is already available on the website, and it contains the vision, mission, and objectives. I can provide the sustainable transport blueprint. Every suggestion in that blueprint must have gained approval. Every year, the Responsibility Centers have their own element of sustainability. Previously, we encouraged green parking and disabled parking spaces."

Participant 10 from University D had the following to say:

"As you can see, the buildings have gardens, so in a way, yes, of course, there are a lot of initiatives from the institution. Of course, we don't allow students to use cars and park inside the campus. As for the others, I don't see that many, maybe the ban of white coffins (polystyrenes)." [Participant 10, University D].

Most of the participants (Universities A, C, and D) highlighted the significance of their initiatives in maintaining a green campus. For instance, the interviewee from University E depicted the significance of awareness in promoting green initiatives, such as Car-Free Day, sustainability campaigns, and recycling. Meanwhile, the interviewee from university C mentioned that despite the absence of green documentation at the university, the employees contributed to environmental protection, such as providing green parking and OKU parking.

In order to achieve clarity within the sustainability reporting context, the participant's view about the factor that led to EEB denoted the first step to explain respondents who contributed to or were affected by the green initiatives established by the HEIs. Other participants opined similarly regarding green initiatives in ecological practices across HEIs in Malaysia. Therefore, HEIs must champion their implementation of initiatives and keep their teams engaged in the project while simultaneously inspiring others to support the deployment of green programs, especially among staff and students [45].

5. DISCUSSION

This study revealed some interesting outcomes, apart from providing a clearer understanding of the green initiatives for adopting EEB in Malaysian research universities. This section presents the main findings by giving prominence to the following: Research objectives, implications, study limitations, and future research directions.

First, although several respondents understood what EEB means, not all respondents fully understood its meaning. This finding aligns with a previous study that indicated some academics' lack of knowledge about environmental sustainability [46].

Furthermore, several universities practiced some forms of green initiatives. However, some green initiatives were handled by selected departments, and the academicians were not empowered to contribute to the decision-making process. Some green initiatives are efficient recycling, use of own food flasks in the cafeteria, Car-Free Day, bringing their coffee mug, going paperless, the ban on polystyrenes, waste-free river, and car park restrictions for students. The academicians explained that the practice of EEB had been based on individual attitudes and culture. This finding aligns with the previous study that alluded that organizational culture significantly influences EEB [47], while attitude toward environmental sustainability influences EEB [48].

The current study also found that green initiatives positively affected EEB. Similarly, Figueredo and Tsarenko [44] asserted that green initiatives are tangible actions that a university is engaged in and are promoted to their stakeholders, thus encouraging conscientious PEB. Iqbal et al. [37] reported that taking initiative behavior can be directed at other behavioral categories. Apart from conserving resources, employees who lobby for or organize recycling programs take an active step to take a more extensive and long-lasting change by engaging in their behavior. Employees who engage in such activities are change agents at organizational and interpersonal levels. Raineri et al. [41] noted that employees who took eco-initiatives in high-quality relationships encouraged sharing knowledge, ideas, advice, and feedback.

Turning to this study, the academicians stressed that green initiatives impacted the adoption of EEB, such as the provision of a green document in analyzing the conservation category (e.g., using a cleaning solution that contains ingredients that do not pollute the environment). The employees were aware of the importance of going green, understood their responsibility, and enthusiastically contributed environmental ideas to their organizations [49].

Next, although the HEIs have implemented several green initiatives, there should be continuous improvement. Further, it is crucial for the top management of HEIs to lead by example, such as recycling, cycling to work, or openly displaying EEB consistently. By doing these, employees will be more encouraged to practice EEB because they will perceive the full supports of top management as regards the green initiatives. This finding aligns with previous studies that alluded to the role of perceived top management support encouraging the proper implementation of green HRM [50], therefore influencing EEB [51].

5.1 Research implications

This study has several implications for scholars. First, although this study focused on HEIs, it has pertinent contributions to other sectors, such as manufacturing [9, 37, 52], tourism [30, 31], and other diverse industry sectors [19, 28]. This study reports the direction of ecological practices undertaken by HEIs. In order to encourage EEB, universities should deploy green initiatives to recognize the potential of

EEB, motivate employee EEB, and encourage employee participation in environmental programs, including banking plastics at cafeterias, adopting green cafeterias, introducing Car-Free Day, as well as organizing sustainability and recycling campaigns. This means; universities should focus on developing efficient green HRM practices, particularly on managing the environmental performance of employees. Green HRM has a substantial impact on the environmental knowledge and the moral obligations of employees to perform EEB [10, 53].

Next, the top management of the HEIs should lead by example by visibly participating in green initiatives, such as the use of bicycles or carbon-free bus to shuttle to the universities. When top management practices green initiatives, employees are encouraged and committed to adopting practices because they are assured that top management endorses the organizational culture Graves et al. [51] asserted the significant effect of top management commitment on employees performing PEB. Additionally, the top management should involve all stakeholders in the decision-making process and the development of green initiatives. Apart from helping to gain more input on how to conserve the environment better, employees should have a feeling of belonging in adopting the green initiatives, thus encouraging them to be proactive in displaying EEB.

5.2 Research limitations

The drawbacks identified in this study may serve as a potential future research endeavor. Essentially, some limitations were noted while interpreting the study findings. This study analyzed primary source data in the national context by involving HEIs. Therefore, generalization is unviable for other cultural or industrial segments. Therefore, the study outcomes may serve as insights for future research projects and managerial action. Second, the data were gathered from interview and focus group discussion sessions, thus implying biased views of interviewees. Because EEB is a relatively new concept, some participants might interpret EEB differently. Third, the number of participants was low to ascertain a comprehensive understanding and consistency among all the interviewees. The research team interpreted the interview data, and the subjectivity of the researchers could have influenced the data analysis process.

5.3 Future direction

This study is an initial approach that determined the factors of EEB adoption in Malaysian HEIs. The current themes grouping depended on the exploratory and subjective criteria. Further studies should incorporate the survey technique with a representative sample of all HEIs established in Malaysia to arrive at a more robust outcome. The EEB adoption model may be assessed and extended by including universities from the private sector or those established in other countries. Future research work may consider comparative studies to compare private and public HEIs. Longitudinal observations of a university may be conducted to assess the decision to adopt green initiatives to their implementation. The model may be applied in alternative research approaches to enhance our understanding regarding EEB adoption among universities. Future work may also assess other essential aspects of EEB, such as support from the top management, green culture, and the impact of employee green practices, quantitatively, because studies have shown that they can increase environmental awareness and knowledge. Upon considering the university's ultimate goal is to achieve a green campus, future researchers may assess the function of green practices to promote sustainability best practices at the global level.

6. CONCLUSION

This study had essentially identified the understanding of EEB according to the participants. These factors led to EEB and the implemented green initiatives by the HEIs in Malaysia. In doing so, academicians from five universities were interviewed to assess their green practices based on their experiences. Many academicians understand what EEB means; however, there is room for environmental awareness among academicians. Also, green culture and top management support emerged as factors motivating EEB among academicians in the selected Malaysian universities. Primarily, the universities did establish several green initiatives that academicians adopted, stemming from their comprehension of the significance of green initiatives. However, the green initiative implementation process has not been all-inclusive. Also, it is suggested that HEIs should make more efforts to optimize and improve the green initiatives by inviting the participation of all key stakeholders, including the academicians. This study sheds some light on the reality of green initiatives and EEB practices in the HEIs and the importance of HEIs in ensuring holistic and fully supported green initiatives.

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