

Make it their Decisions, not your Directives: Exploring Required Green Competencies for Employee Ecological Behaviour

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Background and Purpose: A growing body of evidence confirms that employee ecological behaviour (EEB) is the most critical factor indicating organisational competitive advantage and environmental performance. The present study identifies and explores the green competencies required at the workplace to perform ecological behaviour. No prior study has explored the required green competencies from employees at the workplace in higher education institutions to the researchers' knowledge.

Design/Methodology/Approach: The research utilises the data generated from eighteen comprehensive interviews with the top five Malaysian green universities' employees. The study adopted the content analysis approach to explore contextually relevant competencies required for EEB in the workplace.

Results: Six main green competencies, namely environmental awareness, environmental attitude, environmental knowledge, environmental consciousness, green mindfulness, and green ability, were generated from the analysis supporting ecological behaviour at the workplace.

Conclusion: This research explored the required green competencies of employees to be environmental-friendly in the workplace by investigating the previously neglected domain required in the workplace. The research offers practical implications to universities and human resources (HR) to adopt accountabilities for an organisation to be environmentally sustainable. The recruitment committee and top management of higher education institutions should accentuate an environmental stance and green competencies in job descriptions to entice applicants with an environment-friendly mentality.

Keywords: *Green competencies, Employee ecological behaviour, Higher education institutions, Green universities, Employee green behaviour*

1 Introduction

The belief that income-oriented activities lead businesses is swiftly evolving. Human and organisation activities, including fossil fuel burning, carbon monoxide emissions and deforestation, are the culprits behind distressing environmental scenarios. Various organisations are attempting to implement diverse environmental approaches

by implementing green strategies or environmental management systems to address the crisis (Fawehinmi et al., 2020). These strategies involve reducing carbon emissions by decreasing office materials and electricity utilisation and correctly recycling waste materials to make beneficial products. Nevertheless, acknowledging and shaping individual behaviour is necessary to minimise the negative environmental impacts of organisational activities and

emphasise a sustainable environment to adopt strategies excellently (Anwar et al., 2020). Environmental sustainability has a crucial role in higher education institutions due to the direct and indirect ecological implications involving electricity consumption, waste production, material usage, large movements of people and transportation within a campus (Farooq et al., 2021). Universities contribute less to pollution than the corporate sector. Nonetheless, universities play a critical role in environmental research and awareness. They are responsible for teaching the present and upcoming generations the significance of EEB (Fawehinmi et al., 2020).

As employees are the primary players in the higher institution sectors, achieving university sustainability is practically attainable via their participation (Fawehinmi et al., 2020). Malaysia faces significant environmental challenges as a developing country. For instance, the nation's carbon dioxide (CO₂) emissions are increasing by more than 6% each year, comparable to China's 7.42% yearly growth rate (Anwar et al., 2020). Research universities in Malaysia have been given the task of self-generating revenue and forming holding corporations to run business initiatives based on the commercialisation of their study products (Sheriff & Abdullah, 2017). Besides, these universities are anticipated to expand their intellectual abilities and serve as mentors for other organisations engaged in knowledge enhancement studies. Universities must ensure sufficient skilled and technical experts to face the problems. Various institutions have endeavoured to invent innovative approaches to manage and improve competence to address current research and development difficulties by considering this (Barth et al., 2007). Therefore, a competency framework for personnel quality attributes has emerged as a popular technique for companies looking to assess and increase their employees' skills (Getha-Taylor, 2008).

Numerous research offered several competency frameworks to aid corporations in improving the abilities of their personnel (Wu, 2009). A competency model contains a list of necessary skills. Nevertheless, not all needed skills are equally significant. Recognising the disparities in acknowledged competency levels among high-achievers and others is critical to properly conduct skills development (Lee, 2010). The required green competencies could be condensed into a limited quantity of crucial competencies. Vital competency applications for academicians can be devised and established once the required competencies are determined. Thus, this paper explored the required green competencies for performing ecological behaviour in the workplace among academicians from the top five Malaysian green universities.

Employee ecological behaviour (EEB) encompasses various activities, including recycling (e.g., reusing paper, plastic, glass, and containers), water conservation (e.g., limited water usage when showering or washing hands),

electricity conservation (e.g., switching off lights when not used), reusing (e.g., disposable cups), taking public transportation, cycling, walking, correctly disposing of non-recyclable waste, utilising lesser paper when printing (e.g., double-sided printing), and purchasing or using green products (Bissing-Olson et al., 2016). Adopting EEB can bring numerous benefits, such as environmental performance (Anwar et al., 2020), social sustainability (Amrutha & Geetha, 2020), job satisfaction (Kim et al., 2019b), employee task performance (He et al., 2020), self-esteem and well-being (Zhang et al., 2021).

The primary objective of the current study is to explore the required green competencies for EEB at the workplace, specifically in the Malaysian green universities context. The research tackled explicitly two research questions from employees' perspectives:

(1) What are the green competencies of academics from Malaysia's top five green universities?

(2) How do these green competencies help academics become more eco-friendly?

In light of its primary motives, this research concentrated on a sustainable green environment as a significant contributor to environmental sustainability from the employees' viewpoint. Thus, the originality of the present research is focused on attaining primary aims in the areas discussed subsequently.

1.1 Need for the Study

Studies on environmental-friendly behaviour in the workplace (e.g., Ramus & Steger, 2000; Pinzone et al., 2016) have traditionally observed this behaviour as a voluntary act and defined it as "individual and discretionary social behaviours that are not explicitly recognised by the formal reward system that contribute to a more effective environmental management by organisations" (Boiral & Baron, 2009, p. 233). Norton et al. (2017) differentiated between necessary behaviour that adds to key business goals and optional behaviour contributing to the organisational, social, and psychological environment supporting task performance. EEB is defined as needed ecological behaviour conducted within the context of an employee's required job obligations in this study (Fawehinmi et al., 2020; Norton et al., 2017). EEB includes following organisational regulations, modifying work approaches, selecting responsible alternatives, and developing workplace sustainable goods and procedures.

Previous EEB studies have focused on green human resources management (GHRM) practices to foster eco-friendly behaviour (Anwar et al., 2020), organisational strategies and the role of sustainable advocate (Lasrado & Zakaria, 2019), organisational climate (Tsai, 2018) and outcomes of EEB such as job satisfaction (Kim et al., 2019b) and environmental performance (Anwar et al., 2020). Unfortunately, only limited studies explored

the role of green competencies. Cabral and Lochan Dhar (2019) developed a scale measuring green competencies. Cabral and Jabbour (2020) revealed the mediating effect of environmental training on green competencies and proactive environmental management maturity. Subramanian et al. (2016) investigated the impact of individual green competencies on organisations' green practices and performance goals. However, to the researchers' knowledge, no study has explored the required green competencies for EEB.

The literature focused on competency development among employees at the workplace. For example, Sabuncu and Karacay (2016) assessed professional competencies required for talent management, while Lee (2010) explored competencies for high performers. Wu (2009) studies core competencies for research and development technical professionals, while Phelan and Sharpley (2012) investigated entrepreneurial core competencies and skills. Additionally, Wang and Ha-Brookshire (2018) researched digital competencies required for the anticipated Industry 4.0. Nevertheless, the exploration of required green competencies among employees for performing ecological behaviour remains scarce. This study is the first to explore employees' required green competencies at the workplace based on the top five Malaysian green universities.

Subramanian et al. (2016) proposed that HR managers discover new personnel with green skills and develop appropriate environmental training that benefits current employees. Determining techniques for acquiring the necessary information for sustainability practices and assessing initiatives for obtaining the necessary green competencies could be essential research directions in the future (Chams & García-Blandón, 2019). The study developed a framework to help organisations focus on employees' green competencies for better environmental management.

According to Cardy and Selvarajan (2006), technical and behavioural competencies are two types of competencies found at the employee level. Technical competencies denote occupation-related abilities and knowledge, whereas behavioural competencies imply individual attributes or traits. Competency models are required before implementing behavioural skills (Lee, 2010). A competency model is a collection of success criteria covering the critical behaviours required to thrive in a specific role (Schoonover et al., 2000). Additionally, the competency model could be utilised to determine the necessary competencies people require to enhance their current or future performance. Specifically, employees' competencies could be contrasted to a suitable model to identify competency gaps (Lee, 2010).

The current study is divided into six parts. The second section briefly explains green competencies. The following section elaborates on the methodology adopted in this study in-depth. The results are presented in section four, which discusses the data analysis and comprehensively explains the study's findings. Section five discusses the study

findings, implications, limitations and future research direction. The final section comprises the conclusion.

2 Green Competencies

Green competencies are the environmental knowledge, abilities, and other socioeconomic behaviours that make a person more likely to behave and act in a way that benefits the general well-being of the environment (Subramanian et al., 2016). According to Steele (1980), green competencies are individuals' abilities to engage with their immediate environment positively and enthusiastically. In addition, Steele (1980) continued that humans needed three elements to engage with their natural surroundings. First, an individual must be conscious of environmental crises and desire to safeguard the environment. Thus, their daily life activities should contribute the least to environmental damage. Second, people must understand the fundamental principles of the environment. Finally, they must retain environmental conservation abilities like decreasing waste and emissions. According to Pedersen (1999), green competencies include:

- (1) Resource preservation, practice abilities, and outdoor skills as part of environmental skills
- (2) Conscientiousness as a part of a person's characteristics, style, and consciousness
- (3) Knowledge as a means of seeking and enhancing environmental knowledge

Subramanian et al. (2016) differentiated natural green competencies (NGC) and acquired green competencies (AGC). The effective green competency (EGC) combines NGC and AGC and impacts green performance. According to Roberts' (1997) competencies framework, NGC is regarded as fundamental features gained from individual observations, while AGC is referred to as environmental knowledge and expertise acquired via experiences. The findings showed that AGC is a better predictor of sustainability performance than NGC and has a more significant impact on environmental behaviour. Thus, HR managers may emphasise assessing employees with AGC and providing green seminars and training to help them build AGC to speed up sustainable advancement (Subramanian et al., 2016).

According to Qu et al. (2021), green core competency has a positive and substantial impact on green innovation performance, while green absorptive ability moderates the association connecting green core competencies and green innovation performance. Corral-Verdugo (2002) elaborated on green competencies as a higher-order dispositional variable that includes environmental perceptions, motivations, and behaviours. Empirical data were used to verify the validity. Green competencies were described as efficient answers, green motives, perspectives, and attitudes significant for environmental conservation.

According to Fraijo-Sing et al. (2010), green compe-

tencies comprise two main aspects: environmental knowledge and skills, which must be applied to comply with society's ecology requirements. Researchers of previous studies widely discussed green behaviour as a dimension of green competencies (Subramanian et al., 2016; Cabral & Lochan Dhar, 2019; Cabral & Jabbour, 2020). For example, Subramanian et al. (2016) highlighted that green competencies comprise environmental consciousness, knowledge, skills, and awareness of the environment. Cabral and Lochan Dhar (2019) constructed a scale for measuring green competencies and concluded that competencies encompass green abilities, attitudes, awareness, behaviour, knowledge, and skills. Conversely, Pinzone et al. (2016) explored the role of green competencies building practices on organisational citizenship behaviour and the impact on environmental performance (Anwar et al., 2020).

3 Method

Qualitative research can shed light on the “why” behind environmental behaviour by probing the motivations, beliefs, and attitudes that underpin it (He et al., 2020). The researchers utilised the qualitative approach to comprehensively assess the green competencies of academics for ecological behaviour at Malaysian green universities in this study. Using a qualitative research design allows an explanation of the “how” question to better explain the findings of the “what” question in more detail, especially in discussing new issues such as green competencies in the organisation (He et al., 2020). Although other methodological approaches are suggested, using qualitative methodology in this study does not limit its significance to knowledge development. Employing a qualitative research methodology contributes to overcoming the weaknesses of HRM research as researchers have proposed, particularly on the weak capability of the research data to explain the observed findings (Elo & Kyngäs, 2008; Graneheim et al., 2017). Qualitative research approaches include action studies, case studies, content analysis, grounded theory, historical studies and in-depth interviews.

The content analysis approach was adopted in this study to explore contextually relevant competencies required for EEB at the workplace in a novel context, notably Malaysia. A content analysis was used to analyse the interview data. This approach is deemed suitable to analyse and interpret the interview data for this study to describe and understand the phenomenon of green competencies in the green universities of Malaysia, especially when the topic is still under-researched. Content analysis allows a focus to be given on the subject and context of the study (Graneheim et al., 2017). This focus may allow the variation of responses to be determined and linked to a particular green competency phenomenon.

The use of previous understanding of competencies from the literature is acted as a guideline for ‘theory build-

ing’ rather than ‘theory testing’. This is particularly true for the green competencies topic as it is still under-researched. As a theory-building mechanism, the findings of this study have not been pre-determined but emerged from the interview data. This step is essential to make sense of the information from respondents after the data were gathered (Charmaz, 2007). Without a guideline or theory, researchers may be unable to sensibly integrate their findings into a theoretical stance, exposing the data to personal biases, especially for novice researchers (Gioia et al., 2012). This does not limit the exploratory nature of the research because new knowledge can be developed by extending and challenging the existing knowledge to yield novel insights from the current research findings (Charmaz, 2007).

3.1 Data Collection

The data gathering procedure was divided into two parts. First, the Universitas Indonesia (UI) GreenMetric website ranking was analysed in-depth. Ecological settings and infrastructure, energy and climate change, waste, water, and transportation were all factors in the UI GreenMetric World University Rankings. The factors were ascertained according to information reported by the respective universities that demonstrated a pledge to greening the environment and operating sustainably (Marrone et al., 2018). The UI Green Metric is the world's first university sustainability ranking. This ranking system seeks to assist the sustainability of university campuses by championing university-led social changes in response to sustainability objectives, serving as a self-assessment tool, and advising governments, domestic and international environmental organisations, and society on green campus initiatives (Marrone et al., 2018). This approach is currently one of the most widely used and applied instruments for assessing the sustainability of university campuses (Suwartha & Sari, 2013).

From the UI GreenMetric, the top five green universities were selected based on the purposive sampling technique, namely universities from Malaysia. The selection criteria of the green universities were UI GreenMetric rankings involved gathering basic information on university size and its zoning profile, setting and infrastructure (15%), energy and climate change (21%), waste (18%), water (10%), transportation (18%), and education and research (18%) (UI GreenMetric, 2018). Subsequently, the green initiatives were studied from information available on the respective university's websites. The semi-structured interview protocol, which contains open-ended queries, was designed using data acquired from websites and other internet sources. Many qualitative and inductive studies rely on the progress of the interview protocol concerning the realities of field study (Charmaz, 2007). The ethical committee of Universiti Malaysia Terengganu approved and granted the researchers permission to pursue

the study. Ethical approval was obtained beforehand.

First, interviews were undertaken to gauge in-depth the ecological behaviour of academics from the five green universities. Potential participants were selected using convenience sampling. (Emerson, 2015). Academics were chosen based on their knowledge of the sustainable practices of the development process in universities (Fawehinmi et al., 2020). Participants were notified about the scope of their involvement before taking part in the research.

They were required to sign a consent form in compliance with the universities' existing ethics committee standards. A semi-structured interview protocol was distributed before the scheduled date. The interviews took 30 to 60 minutes and were undertaken face-to-face between February and August 2020. The data collected were audio-recorded and stored in electronic format. Recorded interviews were transcribed using a Microsoft Word file.

Table 1: Characteristics of participants

University	Participants	Gender		Academic Qualification	
		Male	Female	Master	PhD
A	4	3	1	1	3
B	3	2	1	1	2
C	3	2	1	1	2
D	5	2	3	1	4
E	3	1	2	1	2
Total	18	10	8	5	13

3.2 Participants

Semi-structured interviews were carried out with eighteen participants. Table 1 presents the participants' characteristics.

3.3 Data Analysis

Content analysis is used in this study to allow researchers to make sense of the interview data by replicating and interpreting it to the study's context (Elo & Kyngäs, 2008). In this study, content analysis was used to provide condensed and comprehensive descriptions of green competencies among academics in the green universities of Malaysia and their influences on their eco-friendly behaviour. Because there is scarce information about green competencies discussed in previous studies, inductive content analysis was appropriate as the findings of this study are data-driven. The analysis consisted of three processes: preparation, organising and reporting (Elo & Kyngäs, 2008).

First, the preparation process involves identifying units of analysis based on the research questions. The study attempted to answer two research questions: (1) What are the

green competencies of academics from the top five green universities of Malaysia? and (2) How do these green competencies help academics be more eco-friendly? Thus, the unit of analysis was based on the interview protocols. This was likely the most suitable unit of analysis to provide the manifest content sufficient for the following analysis process (Graneheim et al., 2017). Although further progress of the interview largely depends on each informant's feedback, having an interview protocol provides guidelines for a researcher to conduct the interview and avoid personal biases (Gioia et al., 2012).

Second, the interview data were organised according to the category. This organisation involved listening to the audio recorded and reading through field notes before the transcripts were completed. The data were then categorised based on the similarities and variations. At the beginning of this process, initial categories were generated freely before it was reduced to a meaningful theme by merging a similar group of data under the same category. This allows the data to be interpreted based on its belonging.

Lastly, data reporting occurred when final themes were developed based on the underlying concepts related to the topic of green competencies and employee ecological behaviour.

Table 2: Analysis

Themes	Statements
Green Attitude	<i>The attitude, of course. Even though you have the awareness, if you don't want to be responsible, of course, you will not do it. (Respondent 7, University C)</i>
	<i>[...] I think it is not only in the technical part, but attitude, as in how to encourage attitude which is concerned about environmental sustainability. (Respondent 9, University D)</i>
	<i>I think ecological behaviour relates 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 with other faculties (Respondent 8, University B)</i>
Environmental Consciousness	<i>Consciousness has to exist; then, we will take actions. (Respondent 11, University D)</i>
	<i>[...] In terms of green buildings that focus on safety and green-conscious community living on the campus. The meaning of green not only applies to plants, but it is about what the real meaning of green is. (Respondent 10, University C)</i>
	<i>Being energy-friendly or environmental-friendly firstly depends on our level of environmental consciousness. That's what I understand about ecological practices. (Respondent 12, University B)</i>
	<i>I think with Respondent 3, what is important is consciousness. We might be able to do that. It is also related to discipline. If you don't have a consciousness or discipline, you might not be able to do those things. (Respondent 18, University B)</i>
Green Knowledge	<i>I think having enough knowledge is very important. (Respondent 3, University B)</i>
	<i>Because of their background, those in the science field will be more exposed to green practices. (Respondent 2, University C)</i>
	<i>As a teacher, what we can do is give them the knowledge, like throwing the rubbish properly. We don't know where to throw the oil, that's why in the syllabus we teach students where and how we can throw the oil [...]. (Respondent 5, University D)</i>
	<i>As long as people are not aware that they are in danger, they will never feel the effects [...]. (Respondent 16, University A)</i>
Green Ability	<i>if we want to do green practices, it is not necessary to use those materials that are recyclable, but green practices in the sense of sustaining the capacity and avoiding overcapacity. (Respondent 18, University A)</i>
	<i>We have one professor who is a professor in sustainable waste management. So we actually have quite a lot of expertise in sustainability [...]. (Respondent 14, University E)</i>
	<i>[...] We are more towards recycling, although we have expertise on water. But we are working together with [...]. Being a Lestari, we are multi-disciplinary. We are partnering with different groups. (Respondent 13, University A)</i>
Green Mindfulness	<i>To make people adopt green practices, the first thing we need to do is have the concept in their minds. We must put the concept in the minds of students and staff by posting everything about green practices on the campus. They need to know that we need to implement green practices such as recycling [...]. (Respondent 15, University A)</i>
	<i>To me, it is more about our mindset, clean from any pollution. We think that's green enough, but people outside are not seeing it like that [...]. (Respondent 17, University D)</i>
	<i>I do them because I am mindful of my responsibility as a human being. I do them not just at work, but it is my habit in life. When I switch on the lights, I will turn them off when not using them. I will also do the same at home [...]. (Respondent 6, University E)</i>
Green Awareness	<i>I think the awareness. I'm not sure whether it is because of the level of my knowledge or the level of my education. I'm not sure, but my awareness of the environment is there. (Respondent 11, University D)</i>
	<i>[...] one is awareness and conservation. Before that, understanding should come first. If we don't understand, we don't bother; we don't want to practice. (Respondent 12, University E)</i>
	<i>Awareness of moral value [...]. Because you want to do good things, I'm sure you will not be wasting because if you waste, for example, not turning off the light when leaving the office, you will feel guilty. (Respondent 9, University E)</i>

4 Results

The content analysis revealed seven competencies for supporting ecological behaviour in the workplace. Table 2 displays the themes that emerged from the content analysis.

5 Discussion

This research sheds light on the advancement of required green skills, a relatively new research area in employee environmental behaviour. Although most previous studies focus on the application of EEB in the corporate world, a research gap is prevalent in understanding the development of required green competencies of EEB in higher education institutions, particularly in Malaysia. This research adds to the literature on sustainable higher education by providing insight into types of green initiatives and competencies implemented in the university context to enhance environmental behaviour by concentrating on human resource practices, an underexplored area, from a relational perspective. Academics and practitioners will be interested in the research findings. Academics and practitioners will be interested in the research findings. The six themes that emerged from the analysis were utilised below to formalise and discuss the results as key green required competencies for EEB.

Participants of interviews emphasise the critical role of environmental attitude, which is perceived mainly as the barrier to implementation of EEB. Environmental attitude is described as an individual's proclivity to care for the natural surroundings (Bamberg & Möser, 2007), and it is linked to pro-environmental workplace practices (Bissing-Olson et al., 2016). According to the Theory of Planned Behaviour (Ajzen, 1991), attitudes determine behaviour. The studies based on this notion asserted that individuals who care about the environment are inclined to take steps to safeguard it (Blok et al., 2014).

Furthermore, studies have found that having a pro-environmental mindset correlates with having a pro-environmental attitude (Bamberg & Möser, 2007). Some evidence proved that a pro-environmental attitude could anticipate pro-environmental behaviour generally and particularly in workplaces. Managers' views towards pollution control were positively associated with their desire to participate in pollution prevention practices, as per Cordano and Frieze (2000). Farooq et al. (2021) found employees' environmental attitude has a considerable impact on employees' pro-environmental behaviours, and the results are consistent with Safari et al. (2018).

Findings also reveal the tendency of environmental consciousness among employees for performing EEB in the workplace. Environmental consciousness is recognised as a psychological factor that influences people's

pro-environmental behaviour and consists of multifaceted constructs that influence people's attitudes, actions, behaviours, knowledge and intentions (Mishal, 2017). According to Sharma and Bansal (2013), environmental consciousness implies psychological elements that influence people's willingness to participate in pro-environmental conduct as a belief system component. Farooq et al. (2022) stated that environmental consciousness significantly shaped employee pro-environmental behaviours. Kautish et al. (2019) noted that environmental consciousness and recycling intents substantially affected green purchasing behaviour compared to consumers' perceived effectiveness and readiness to be ecologically responsible. Results are consistent with Kautish et al. (2019) and Yusliza et al., (2021).

In terms of workplace ecological behaviour, participants revealed the importance of the environmental knowledge of an individual. Environmental knowledge refers to a person's understanding of human relationships, environmental challenges, and the interconnectedness of ecological systems (Burchett, 2015). The knowledge could include the abilities required to resolve negative impacts on ecosystems, resulting in pro-environmental initiatives. According to Levy and Marans (2012), pro-environmental behaviours are influenced by understanding concerns and mitigation strategies. As per the literature, green knowledge is vital in influencing the behaviour of university students in developing and emerging countries to be environmentally concerned (Vicente-Molina et al., 2013). Ecological education provides students with the discussed environmental capacity (Zsóka et al., 2013). The results of our research are similar to the previous findings of Fawehinmi et al., (2020). Green knowledge serves as a mediator between green activities and employees' environmental behaviour at work (Fawehinmi et al., 2020; Okumus et al., 2019).

Green abilities of employees also emerged as a major source to perform EEB in the workplace. Abilities refer to an innate capacity that facilitates learning and improves work performance (Goffin & Woycheshin, 2006). HRM strategies can strengthen employees' abilities, according to management literature. Green skills are a subset of green competencies that allow employees to improve their ability to undertake environmentally responsible tasks (Cabral & Lochan Dhar, 2019). Additionally, green abilities assist employees to grow and improve their performance to attain environmental conservation. This aspect is the most vital factor in achieving GHRM innovation in organisations (Rajiani et al., 2016). Cabral and Dhar (2019) discovered that green training positively impacts green abilities. Furthermore, Arulrajah et al. (2015) discussed the impact of green training on employees and developing green talents in the workplace, which leads to improved general environmental performance through environmentally friendly behaviour.

Furthermore, interviewees refer to the important aspect of the mindfulness of employees. Participants individuals with green mindfulness of environmental issues have more EEB. Green mindfulness includes individuals' more extensive environment awareness, openness to new information, multiple perspectives awareness, attentiveness to a unique environment, and wakefulness in the present (Langer & Moldoveanu, 2000). Organisational mindfulness concerning green management is crucial in the environmental age to encourage sustainable values within a firm (Chen et al., 2014). Heightened awareness and understanding of new information and the current surroundings characterise green mindfulness (Langer & Moldoveanu, 2000). Mindfulness efficiently contributes to good behaviour changes, especially in the setting of ecological well-being (Yusliza et al., 2021)

Employee environmental awareness is also reflected in the themes of interviews that contribute to EEB. Kollmuss and Agyeman (2002) described environmental awareness as "knowing the impact of human behaviour on the environment" (p. 253). They highlighted that several cognitive and emotional constraints limited environmental concerns. The non-immediacy of several environmental challenges, slow and steady environmental degradation and the intricacy of environmental concerns are cognitive constraints that could substantially impede a person's willingness to act ecologically. Emotional reactions and emotional non-involvement are examples of emotional limitations. Individuals' environmental awareness is predicted to improve as their ecological conduct advances (Yusliza et al., 2021). Green awareness has been studied in numerous contexts and has yielded similar impressive findings (He & Liu, 2018, Garcia et al., 2019).

5.1 Theoretical Implications

From a theoretical standpoint, this research adds to the literature by expanding the understanding of green management, a worldwide priority in recent years. Although an increasing number of academics have argued for the use of green policies to accomplish an organisation's environmental goals, scant research has been done on the green competencies needed for EEB at work. This research builds on previous studies on the idea of green abilities needed in the workplace for EEB. Regarding the relationship between green knowledge and EEB, strong environmental knowledge is desired for an EEB and guides environmental sustainability. The findings suggest that employees with a high level of environmental knowledge are more inclined to act in environmentally beneficial ways at the workplace. These results are supported by other studies (Okumus et al., 2019; Safari et al., 2018). Resultantly, choosing personnel with higher environmental awareness increases the likelihood of evaluating environmental risks to the firm

and the general public and acting in an environmentally beneficial manner.

The present research results revealed that environmental awareness among academic staff gives them a feeling of shared objective towards the university's environmental goals and motivates them to work harder to meet those goals. Nevertheless, the results align with Saleem et al. (2020). Individuals who are conscious of the environment are more prone to participate in pro-environmental practices at work (Okumus et al., 2019). As per prior studies, employees who are well informed on ecological and environmental concerns are more willing to engage in green behaviours at work (Saleem et al., 2020). Employee behaviour to perform eco-friendly at the workplace depends on green ability. This study's results indicated that employees' ability to behave in an eco-friendly manner is a significant competency. Green capabilities refer to an employee's ability to encourage altruism, which is concerned with colleagues' well-being, and establish biospheres through demonstrating green behaviour in the workplace (Rajiani et al., 2016). Employees should be able to acknowledge and comprehend environmental issues while also attempting to mitigate adverse consequences (Anwar et al., 2020).

Green mindfulness evolved as contributing factor to ecological behaviour among academics of higher educational institutes at the workplace. Heightened awareness and understanding of new knowledge and the current surroundings characterise green mindfulness (Langer & Moldoveanu, 2000). Mindfulness has been shown to effectively contribute to good behaviour change, especially for environmental well-being (Yusliza et al., 2021). Chen et al. (2014) revealed the vital role of green mindfulness for employee green creativity which is critical to developing environmentalism. Environmental attitudes appear to positively impact EEB at the workplace and emerged as a significant competency required for EEB. Blok et al. (2014) revealed that employees with a green attitude have a firm intention to act for environmental protection. According to Merli et al.'s (2019) study on coastal tourism, coastal tourists have a better environmental attitude towards conserving coastal tourism sites by not using disposable articles but instead paying more for sustainable utensils. Scholars also discovered a positive effect of environmental attitude on EEB (Bissing-Olson et al., 2016; Blok et al., 2014).

The results denoted that environmental awareness seems to play a significant role in the development of EEB. Environmental consciousness is a way of connecting people to their surroundings and promoting environmental conservation. Employee awareness allowed them to create good environmental behaviours and motivated them to participate in EEB at work (Zareie & Navimipour, 2016). Farooq et al. (2022) discovered that environmental consciousness positively affects workplace environmental behaviour. Furthermore, the findings are consistent with prior research, showing that people with a high environ-

mental awareness are more ready to embrace environmentally responsible consumption habits (Alsmadi, 2007).

Green competencies were previously thought to be restricted to the corporate world (Cabral & Lochan Dhar, 2019). Therefore, this study adds to Malaysia's research on green competencies in higher education by adding to the body of knowledge on campus greening from a behavioural standpoint by exploring green competencies required to perform ecological behaviour in the workplace. The study findings add to the literature focusing on the employees' green competencies and signify the influence on the academic staff's EEB and the environmental performance of universities. Thus, this research also addressed the call for future research by Chams and García-Blandón (2019) to explore the required green competencies for performing ecological behaviour in the workplace. Moreover, this study extended the work of Anwar et al. (2020), which examined the impact of green competencies building practices on organisational citizenship behaviour towards the environment but did not explore the required green competencies to perform workplace ecological behaviour.

5.2 Practical Implications

Workplace and people management issues are often viewed as context-dependent and interdependent (Cooke, 2018). In particular, Employee Ecological Behaviour (EEB), which is treated as a distant issue for certain countries and organisations, requires a more contextual approach to investigate the topic to offer more localised ideas to solve the issue. Thus, the current study is relevant to fill the literature gap from international perspectives other than the Western world. The societal context of Malaysian green universities is indeed a good start to exploring the Malaysian context as they are likely to be a reference by other universities in the country (Anwar et al., 2020; Farooq et al., 2021).

The research findings offer university stakeholders evidence-based implications concerning the relative significance and contributions of various green abilities necessary at work for EEB. The findings will assist policymakers and universities with HR management strategies that help influence EEB at work for academic employees. Green hiring strategies can amplify a company's environmental commitment and green competencies in job descriptions of a university to entice applicants with an environmental perspective. Besides, training programmes for increasing green competencies are crucial because employees with environmental abilities are prone to participate in environmental performance (Cabral & Lochan Dhar, 2019). The research and development centre of universities and organisations can be more focused on green competencies to shape EEB in the workplace. Appreciating employees for positive environmental actions will encourage them to further support campus environmental activities. Human

relationships with the system and natural environment are complicated and varied, akin to environmental challenges. Formal methods for reducing emissions, waste, and energy consumption do not encompass behaviours that might improve a university's environmental performance. The exploratory study on required green competencies provides a pathway for policymakers to focus on specific skills and attitudes towards EEB.

Subsequently, establishing a sustainability strategy and plan with particular environmental aims and targets applicable to all employees is essential. The strategy establishment requires HR department cooperation, as it is accountable for supplying employees with the necessary skills (Subramanian et al., 2016). Notably, GHRM practices particularly play a critical role in distributing green capabilities in organisations. This approach (Refer to Figure 1) gives HR departments clear instructions on improving long-term performance. The first stage is identifying and interviewing applicants concerned about environmental issues.

Furthermore, job descriptions must specify and explain the environmental tasks associated with a role, the skills, knowledge, and abilities. Candidates must complete the environmental activities indicated and interview requirements for organisations to identify and recruit the best talent. Employees' green knowledge, ability, understanding, and conscience should be retained, developed, and improved in the future by providing adequate training through green programmes. Furthermore, new employee green training is critical for improving their green competencies (Cabral & Lochan Dhar, 2019).

5.3 Limitations and Future Research

Future studies are possible because of this study's methodological and theoretical constraints. First, this study is a qualitative study that gathered data at a single point in time. Considering Malaysia as a non-Western country adds the significance of this study as scholars urged that more contextual dependent studies be conducted in exploring workplace issues (Cooke, 2018). Green competencies are skills and attitudes that may take time to increase or decrease over time. Future studies may use a longitudinal research strategy to examine the changes in green competencies with EEB at work to gain a comprehensive understanding. Second, other universities are adopting significant efforts to shift to a sustainable green campus. Thus, future research should consider other green institutions worldwide. Future research may adopt a mixed-method approach to look into the results of green competencies and EEB in the workplace. Relying solely on qualitative data derived from face-to-face interviews offers minimal insight into respondents' perceptions. A mixed-method approach could be adopted to undertake a comprehensive study in future studies. Based on content

analysis in this research, green competencies required at the workplace for EEB were explored. However, green competencies are not the only factors that shape employee behaviour at the workplace. Future studies should consider other organisational level factors, such as top management

support (Farooq et al., 2021), green transformational leadership (Wang et al., 2018), and individual-level factors, including green self-efficacy (Fawehinmi et al., 2020), and green mindfulness (Farooq et al., 2021).

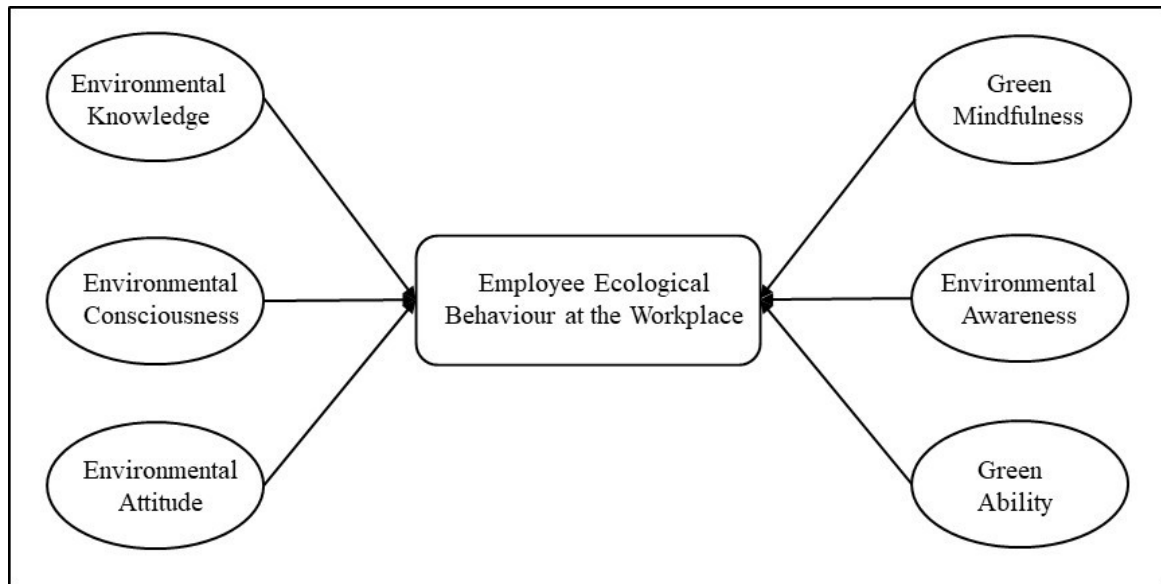


Figure 1: Framework of required green competencies for employee ecological behaviour

6 Conclusion

This research demonstrates that environmental knowledge, awareness, attitude, consciousness, ability, and mindfulness are required in employees to behave in environmental-friendly ways by investigating the previously neglected green competencies domain required at the workplace for EEB. We investigated green competencies among staff at Malaysian green universities using thematic analysis to perform EEB in the workplace. In line with ecological behaviour theories, our model supports the favourable influence of environmental knowledge, awareness, attitude, consciousness, ability, and mindfulness on EEB performance, which is still rare in Malaysian higher education (Farooq et al., 2022; Fawehinmi et al., 2020; Yusliza et al., 2021). We suggest that green competencies positively motivate employees to become involved in EEB in the workplace. Switching off electrical and electronic devices when not in use and reduced printing to minimise paper wastage are peculiar behaviours that employees develop formally through green competencies in the workplace. Our model promotes environmental sustainability among organisations by explaining that organisation specific green competencies and practices transform employee outlooks when provided with a supportive green climate,

which, in turn, improves EEB at the workplace, strengthening organisational relationships with stakeholders and the society. Higher education institutions have learned that failing to consider human or behavioural variables in their environmental endeavours will result in ineffective environmental performance, as the realisation of increasing environmental responsibility has grown. However, a scarcity of research exists in guiding the effective implementation of environmental policies in universities using behavioural interventions. Ultimately, this research aimed to connect the HRM nodes and environmental management literature within green universities to explore the required green competencies for academic staff's ecological behaviour. As leaders in information creation, universities should be judged based on how much environmental awareness they generate and how devoted they are to fostering sustainable behaviour on their campuses. The findings offer policy-makers guidelines to explore the green competencies that academic employees should possess.

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