Green Office Practices: Sustainability Approaches in Office Management[1] doi

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Abstract

The purpose of this research is to examine the awareness, perception, and experiences of the faculty members working in the Office Services and Secretarial Department in Türkiye regarding green office applications. In the study, the faculty members' perspectives on the concept of green office, the place of green office applications in education, their application experiences, and their views on the future were investigated. The research was conducted with the phenomenology design, one of the qualitative research designs, and a structured interview form was used as the data collection tool. The study group consists of faculty members who have been working for five years. The data were analyzed using the content analysis method, two researchers were asked to theme the data to ensure reliability, and the agreement percentage (89%, 91%) was calculated. According to the research results, green office applications are addressed in the context of environmental and economic sustainability, and the emphasis on social sustainability remains limited. Green office applications, which are associated with functions such as efficiency in resource use, environmental awareness, and corporate responsibility, are not given sufficient space in education programs, and there is a lack of systematic information. In this context, the research makes an original contribution to the field with suggestions regarding sustainability-oriented regulations in office management education and its adaptation to vocational education.

Keywords: Green Office Practices, Office Management, Sustainability.

JEL Codes: Q56, Q01, M14.

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1. Introduction

The concept of sustainability came to the fore with the definition of sustainable development by the World Commission on Environment and Development in 1987 (Hopwood, Mellor, & O'Brien, 2005). The definition of sustainable development by the World Commission on Environment and Development is "a form of development that meets the needs of present generations without compromising the ability of future generations to meet their own needs" (WCED, 1987). This form of development covers many different areas, such as education, culture, and technology, within the scope of environmental, economic, and social sustainability (United Nations Educational, Scientific and Cultural Organization, 2024; Sachs, 2015). With the 21st century, sustainability has become a multifaceted and comprehensive concept with its environmental, economic, and social dimensions. The green office stands out as one of the applications that contribute to sustainability.

Environmental sustainability covers sustainable development actions, policies, and strategies that aim to control environmental impacts or conserve resources by reducing carbon emissions, minimizing waste, and protecting environmental resources, such as water, etc., and the ecosystem (Tennakoon, Janadari, & Wattuhewa, 2024). Green office practices such as energy saving, waste management, and carbon emission control serve the purpose of environmental sustainability and increase efficiency. At this point, the scope of green office practices is determined by environmental sustainability principles (Aroonsrimorakot, Laiphrakpam, Arunlertaree & Korattana, 2020).

Economic sustainability refers to the establishment and preservation of an economic structure that ensures the highest possible level of well-being for present and future generations despite limited resources. Green office practices contribute to economic sustainability by aiming to reduce costs and increase efficiency. Conversely, economic sustainability also provides guidelines that enhance the applicability and continuity of green office practices (Markulev & Long, 2013).

Social sustainability is the continuity of the well-being of the individual and society through practices such as equality in access to basic social services, respect for cultural differences, broad participation in political processes, and social support network mechanisms (Littig & Griessler, 2005; McKenzie, 2004). Green office practices such as ergonomic furniture, natural light, a quiet work environment, air quality, etc., which are included in the scope of social sustainability, are fundamental requirements that ensure the strengthening of the psychological, physical, and social well-being of employees (Kantola, 2019). As can be seen, there is a mutually transforming interaction between the environmental, economic, and social sustainability dimensions of green office practices.

It is important for field experts working in work environments where green office applications are implemented to have sustainability-oriented professional competencies in terms of supporting environmental, economic, and social sustainability. Indeed, office management experts such as executive assistants, medical secretaries, legal secretaries, and customer representatives play a key role in creating a supportive organizational climate, culture, and structure in addition to implementing green office applications and ensuring that sustainability principles are implemented in office management. Sustainability principles in office management are necessary for organizational efficiency and social welfare, as well as environmental responsibilities. In this context, green office applications in the context of sustainability in office management are an important tool in terms of strengthening the corporate culture supporting sustainability and triggering social change in line with sustainability principles.

2. Research Problem

The changing conditions of the 21st century, characterized by ecological degradation, economic imbalance, political instability, and social turmoil, make it difficult to achieve sustainability goals. However, the solution to ongoing problems depends on implementing environmental, economic, and social sustainability principles with a holistic perspective. At this point, rather than an approach that prioritizes any of the sustainability dimensions, it should be supported by a series of regulations such as environmental protection policy, efficient resource use guidelines, practices that support economic stability, creating a social assistance and safety net, etc.

Environmental sustainability refers to maintaining the capacity of natural resources to meet societal needs at the same level for both present and future generations. It is based on the principle that economic and social activities should be carried out while preserving ecological balance (Morelli, 2011). In this context, environmental sustainability focuses not on the speed of development but on how it is achieved.

Economic sustainability is the conduct of financial activities in a way that maintains the stability of economic growth and preserves the level of capital (Stiglitz, Sen, & Fitoussi, 2009). However, this growth and stability are sustainable if they are achieved without harming the environment and by observing social justice. Therefore, economic sustainability requires financial activities to be conducted without compromising the principles of environmental and social sustainability (Anand & Sen, 2000).

Social sustainability is the improvement of the quality of life by meeting the basic needs of the in-

dividual and the provision and continuity of social welfare (Woodcraft, 2015). In this respect, social sustainability is not limited to social justice and quality of life but also forms the basis of environmental and economic sustainability. Social sustainability includes preventing the damage to natural resources and encouraging economic growth (Ruževičius, 2012). From this, it is understood that sustainability requires a balanced blend of environmental, economic, and social sustainability.

Sustainability should be addressed with an interdisciplinary and holistic perspective with its economic, environmental, and social dimensions (Munasinghe, 2004; 2009). Because business performance is not limited to economic indicators, it also includes the environmental and social consequences of activities (Elkington, 1997). In this context, it is important to implement green office practices within the scope of sustainable office management in offices, which are the main centers where business activities are carried out (Aroonsrimorakot, Laiphrakpam, Arunlertaree, & Korattana, 2020; Holmes & Hacker, 2007). Green office practices aim to reduce the consumption of natural resources by increasing the environmental efficiency of offices, to support sustainability by increasing the environmental awareness of employees, and to strengthen the fight against climate change with the use of renewable energy resources [World Wide Fund for Nature (WWF), 2016].

The Intergovernmental Panel on Climate Change (IPCC, 2023) reports that human activities are the main cause of global warming. According to the report, human-induced factors such as fossil fuel consumption, unsustainable consumption habits, changing land use patterns, etc. cause serious and irreparable consequences such as more frequent and severe weather events and rising sea levels. In addition, increasing temperatures, unpredictable weather conditions, floods, droughts, and famines, along with climate change, threaten the existence of plants, animals, and humans (Holmes and Hacker, 2007). At this point, adopting policies, strategies, and habits aimed at preventing climate change at social, organizational, and individual levels is an issue that should not be neglected. On the other hand, policies implemented at the global level should be supported by sustainable workplace practices.

Strategic guidelines indicating the sustainability policies of the company, documentation of the process, and regular feedback at the individual level facilitate the active participation of employees and increase their motivation. The manager has a key role in the implementation of sustainability policies but should be supported by the way employees do their jobs. Managers take on the role of a change agent, who guides the process and is determined and supportive. Green office practices are one of the most effective ways to ensure that employees support sustainability (Brazdauskas & Zirnele, 2020;

Ones & Dilchert, 2012; Robertson & Barling, 2013).

The concept of a green office is a practice that aims to contribute to sustainable development by reducing the negative impacts of office activities on the environment (Brazdauskas & Zirnele, 2020). Green office practices consist of a series of activities that ensure the adoption and implementation of environmental, economic, and social sustainability principles such as reducing environmental impacts, efficient use of resources, and ensuring workplace peace in businesses (Kuhre, 1995; Hempbill, 2013). However, seemingly small steps such as using computers in power-saving mode, preferring double-sided photocopying, turning off unnecessary lighting, recycling waste, and using environmentally friendly options such as bicycles for transportation have significant positive results (Aroonsrimorakot et al., 2020). However, the sustainability of green office practices relies on the support provided by green buildings. A green building is the creation of the infrastructure that enables green office practices to be carried out throughout the building (Holmes & Hacker, 2007; Kibert, 2016).

Green office practices include efficient use of energy and water, management of waste and recycling, use of environmentally friendly transportation and materials, reduction of ecological footprint, paperless office approach, raising employee awareness, etc. (EPA, 2020; Lozano, 2006; UNDP, 2019). Energy and water saving means using natural resources effectively and efficiently without waste (Moezzi and Lutzenhiser, 2010). Waste and recycling management is the reprocessing of all kinds of discarded materials into usable products (Wilson, Velis, and Cheeseman, 2006). Environmentally friendly transportation includes using public transportation, bicycles, or walking, as well as vehicles that reduce greenhouse gas emissions by utilizing renewable energy sources (Banister, 2008; Black, 2010). Paperless office management is the transfer of all transactions and processes carried out on paper in traditional office management to the digital environment (Sellen and Harper, 2002).

To adopt green office practices throughout the company, a sustainability team consisting of employees from different departments responsible for auditing, implementation, and training should be established. The sustainability team should be equipped with the authority and responsibilities it needs as well as the freedom to use initiative when necessary. At this point, the support of the management, the visibility of green office practices (via official website, social media, posters, etc.), the reward system that motivates employees, and the support of the process with training and consultancy services are important (Brazdauskas & Zirnele, 2020). Although the focus of green office practices is environmental sustainability, sustainability contributes to economic and social sustainability by its very nature.

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Rapidly increasing urbanization, rising energy costs, and global pressures on environmental sustainability make it inevitable to adopt more efficient, environmentally friendly, and human-centered approaches in office management. In this situation, "green office" practices that focus on cutting down carbon emissions, supporting sustainable office work, saving energy, using resources wisely, and reducing waste (Aroonsrimorakot, Laiphrakpam, & Sarapirom, 2021) are important because they not only save money but also help the environment and support responsible business practices. Green office strategies produce concrete outputs for sustainability by implementing multifaceted goals such as reducing resource consumption, minimizing environmental damage, increasing employee well-being, and reducing operational expenses. In this context, we should specifically address each relationship of green office practices and environmental, economic, social, and cultural sustainability types, and we should examine in detail how the practices integrate with the multidimensional sustainability perspective.

Economic sustainability and green office practices aim to provide long-term economic gains and are fundamentally based on environmental sustainability and green office practices. For example, paperless office practices, double-sided printing policies, use of recycled paper, encouragement of digital distribution, and use of LED lamps and motion sensor lighting systems create lower expenditure costs and provide profit in the long term. Again, profit is made from the meal and travel expenses paid to employees by offices operating remotely or in a hybrid model. Therefore, all activities carried out within the scope of green offices not only support environmental sustainability efforts but also support economic sustainability.

Green office practices, which have become widespread in many institutions, especially universities in Europe, contribute to the development of institutional policies in addition to raising awareness about sustainability (Filho, Salvia, & Pretorius, 2019). However, although sustainability awareness has increased in both the public and private sectors in Turkey, there are still areas open to development, especially in practice. While the "Green Campus" and "Green Office" practices of universities lead the way in raising awareness, the need for systematic sustainability practices continues (Arslan & Arslan, 2021; Kılkış, 2006). At this point, the awareness of faculty members and administrative staff, students, and managers, as well as their voluntary participation in the process, are determinants of its effectiveness and level of success (Brazdauskas & Wiek, 2017; Salvia, Filho, Brandli, & Griebeler, 2020).

Office Management and Executive Assistantship, Court Office Services, Call Center Services, and Medical Secretarial and Documentation Office Services and Secretarial are programs that train administrative assistants, legal secretaries, customer representatives, and medical secretaries. The awareness, adoption, motivation, and participation levels of these professional groups, who spend their entire professional lives in the office environment, regarding green office practices have the potential to make a significant difference in terms of sustainability. At this point, it is thought that the awareness, adoption, motivation, and participation levels of the faculty members working in the programs regarding green office practices are decisive.

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Executive assistants, legal secretaries, customer representatives, and medical secretaries have duties and responsibilities that directly or indirectly affect sustainability within the scope of green office practices such as electronic document management, paperless office management, recycling and waste management, use of environmentally friendly materials, and the execution of organizations (meetings, travel, etc.) by keeping the carbon footprint under control. Although the focus of green office practices is environmental sustainability, sustainability inherently contributes to economic and social sustainability.

Both international and domestic literature mainly focuses on the performance of green buildings (Geng, Lin & Zhu, 2020; Halıcıoğlu, Demirkapı, Gürel, & Kasul, 2023; Simons, Robinson & Lee, 2014; Zen, Subramaniam, Sulaiman, Saleh, Omar & Salim, 2016). However, there are studies examining the role of employees in sustainability in the context of green human resources (Kavgacı & Erkmen, 2021). There are studies focusing on environmental management systems and the expectations and perceptions of users working in green buildings.

When the studies on sustainability and green office applications in office management are examined in the literature, no studies specific to this field were found except for a book consisting of the papers presented at the 3rd International 18th National Office Management and Secretarial Congress with the theme of "New Business Models and Sustainability in Office Management," edited by Altınöz and Öztürk Başpınar (2024). However, the topics discussed include green office applications (Fuerst & McAllister, 2011; Thanayankizi, Ghai, Chakraborty & Seetharam, 2011), the amortization period of investments (Yalılı Kılıç & Yahşi, 2019), their operation (Adomßent,

Grahl & Spira, 2019), and implementation difficulties (Ong, Yusof & Osmadi, 2021). As can be seen, green office applications are not given enough space in both domestic and international literature and are not specifically addressed in the field of office management. It is believed that this study, which addresses green office applications within the scope of sustainability in office management, will make an original and important contribution to the field.

This research has drawn attention to the key role of executive assistants, medical secretaries, legal secretaries, and customer representatives in the implementation of sustainability strategies by addressing green office applications within the scope of sustainability in office management. These occupational groups have a duty and responsibility area that is effective in the adoption and dissemination of sustainability principles in business activities. At this point, obtaining the opinions of the faculty members of the Office Services and Secretariat and Medical Documentation and Secretariat departments plays a triggering role in the creation of a sustainability culture that starts from the office and spreads to the business and society, and in taking deep-rooted and permanent steps. Because the knowledge, awareness, skill, and competence levels of the faculty members become a strategic element that determines the direction and speed of the sustainability-oriented transformation in social development through education, research, and social contribution activities.

The purpose of this research is to deeply examine the awareness, perceptions, and experiences of the faculty members of the Office Services and Secretarial department regarding green office applications. In this context, the level of awareness, adoption, and application of green office practices among faculty members will be revealed. In this way, it is aimed to contribute to the restructuring of vocational education in the context of sustainability and the dissemination of sustainable office management based on green office practices. In line with this main objective, the following questions were sought:

a)   What is a green office according to faculty members?

b)   What are the faculty members' views on the place of green office applications in office management education?

c)   What are the experiences of faculty members in integrating green office applications in office management education?

d)   What's the future of green office applications in office management, according to faculty members?

3. Method

Since the research aimed to gain an in-depth understanding of the participants' subjective experiences and perceptions regarding green office practices, it was conducted with the interpretive phenomenology approach, which is a qualitative research design. In phenomenological studies, it is important to truly understand and explain the topic being researched (Cresswell, 2013; Patton, 2014) and researchers look for the meaning of participants' experiences by interpreting their personal and conceptual insights (Smith, 2001).

The research was conducted with the phenomenological design, which is accepted as essential to understand and explain the phenomenon under research with its true nature (Cresswell, 2013; Patton, 2014). Phenomenology interprets what the participants convey within the framework of conceptual and personal information and tries to find the meaning of the participants' experiences (Smith, 2001). The research was carried out using the qualitative interview technique. Qualitative interview techniques give participants the opportunity to reveal their perspectives on the subject (Kvale, 2005).

The universe of the study consists of faculty members working in the Office Services and Secretarial Departments of Social Sciences Vocational Schools and the Medical Documentation and Secretarial Program of Health Services Vocational Schools in Türkiye. The purposeful sampling method was used to determine the study group. Purposeful sampling is based on the principle of selecting individuals with in-depth knowledge of the subject under investigation. In this context, the analogous sampling method was adopted from purposeful sampling methods (Yıldırım and Şimşek, 2018). Faculty members who have been working in the Office Services and Secretarial Department of Social Sciences Vocational Schools or the Medical Documentation and Secretarial Program of Health Services Vocational Schools for at least five years were included in the study group.

A semi-structured interview form titled "Interview Form on Green Office Practices and Sustainability in Office Management" was developed by the researcher. The process of developing the interview form consisted of three stages. In the first stage, studies conducted on the subject were examined, and a draft form was created. In the second stage, the draft interview form created was sent to field experts, and their opinions were requested. In this context, opinions of faculty members with ten years or more experience working in various universities in the fields of office services and secretarial or medical documentation and secretarial were consulted. In the last stage, the form was finalized by taking into account the opinions of the experts. The semi-structured interview form used in the research included the following questions:

1.   What does the concept of "green office" mean to you? How do you define this concept?

2. Why do you think green office practices are important for office management?

3. To what extent do you think environmental awareness or sustainability issues are included in office management education?

4. Do you address green office practices in your course content? Can you give examples (materials used, activities, projects, sample application reviews, etc.)?

5. If you cover green office applications in your course content, what are the difficulties you encounter in the process of integrating green office applications into office management education?

6. In your opinion, what knowledge, skills, and attitudes does an office manager need to have to effectively implement green office applications?

7. How do you assess the level of knowledge and awareness among your graduates regarding sustainability and green office applications in office management?

8. What kind of support or resources do you think are needed to develop awareness among students and educators regarding sustainability and green office applications in office management?

9. In your opinion, can green office applications become one of the core competency areas of the office management discipline in Türkiye? Why?

The research was conducted with the permission of Kırşehir Ahi Evran University Social and Human Sciences Scientific Research and Publication Ethics Committee dated 30.04.2025 and numbered 2025/08/21. The interviews were conducted with faculty members who have been working in the Office Services and Secretarial or Medical Documentation and Secretarial departments of vocational schools for at least five years in the spring semester of the 2024-2025 academic year. The data collection process continued until the interviews reached data saturation, and 15 faculty members were interviewed. The interviews were conducted with the approval of the participants after information about the subject and purpose of the research was provided.

Content analysis was used in the analysis of the data. The data analysis process consists of the following stages; (1) organizing the data and preparing it for analysis, (2) reading the data, (3) creating codes and themes, (4) interpreting the findings (Creswell, 2013; Yıldırım & Şimşek, 2018). In this context, the collected data were coded, themes were created and interpreted based on the coded data. However, since the researcher plays a key role in qualitative research, credibility, dependability, transferability and confirmability criteria (Lincoln and Guba, 1985; Cited in Creswell, 2013) were tried to be provided in order to ensure validity and reliability.

In order to ensure credibility, expert opinions were first sought in the creation of interview questions, and the interview form was finalized in line with the recommendations of the experts. Denzin and Lincoln (2005) state that comprehensive definitions of terms are necessary for qualitative researchers. Therefore, in order to ensure the transferability of the research, detailed descriptions of the data were attempted, and the findings were supported with direct quotations. To ensure confirmability, the transcribed data was sent to the interviewers, and approval was obtained before the analysis process was started. After the analysis was completed, the data was sent to two different researchers in order to ensure the reliability of the research. The researchers who examined the data analysis expressed their opinions on the appropriateness of the determined code, theme, and interpretation, and if they deemed it necessary, made corrections to the theme coding. The researchers' agreement percentages with the current analysis were calculated with the formula Agreement Percentage (P) = [Consensus (Na)] / Consensus (Na) + Disagreement (Nd) × 100, and it must be 70% and above (Miles and Huberman, 1994). The reliability of the research was ensured with 89% and 91% agreement rates.

4. Findings and Interpretation

When looking at faculty members' opinions about green office applications in office management, it becomes clear that they focus on themes like understanding green office applications, how useful they are, their role in education programs, their importance for office managers, and the future of these applications in office management.

4.1. Awareness Regarding Green Office Applications in Office Management

When the opinions of the faculty members regarding green office applications in office management are examined, in addition to the opinions providing information regarding their own awareness, there are prominent statements regarding the awareness levels of students/graduates regarding green office applications. Table 1 includes opinions regarding the awareness of the faculty members regarding green office applications in office management.

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Tablo 1. Faculty Members Awareness Regarding Green Office Practices in Office Management

Themes	Examples of Direct Quotations	Frequency
Enviromental Protection Awareness	Office environments designed with environmental awareness (K1) Designing work and processes in offices without harming the environment or people (K5) Working environments with environmentally friendly conditions (K8) Conducting office activities without harming the environment (K10)	8
Efficient and Effective Use of Resources	Carrying out office activities without harming the environment (K10) Choosing energy-efficient electronic devices and lighting (K5) A work area that prevents waste of environmental resources (K11) Saving economic, cultural, and social effort and energy (K13)	7
Decoration	Environments where decorative elements such as flowers are used (K14). Design office work in a way that does not harm people (K15)	2

According to Table 1, faculty members view green office practices in office management as encompassing environmental protection awareness, efficient and effective resource use, and decorative elements. In addition to these, there are faculty members who consider green office practices in the context of social sustainability in the form of "an environment where peace is provided" (K14) and in the context of sustainability in a holistic manner in the form of "Transformable" (K6), "Continuity of the world" (K1), and "Measures, practices, and policies for sustainability" (K14), etc.

When the participant views are examined, it is understood that green office applications in office management are seen within the scope of environmental sustainability rather than the social dimension of sustainability. However, the emphasis of the faculty members on the efficient and effective use of resources reveals that the concept is associated with economic sustainability. At this point, although the emphasis of the faculty members on ergonomic office design and the emphasis on "an environment where peace is provided" indirectly refer to social sustainability, it is obvious that the general tendency is to address green office applications in terms of environmental and economic sustainability. Based on this, it can be said that the environmental and economic sustainability awareness of the faculty members regarding green office applications in office management is high, while the awareness regarding social sustainability is low. Table 2 presents the faculty members' views on the level of awareness among students and graduates regarding green office applications in office management.

Table 2. Faculty Members' Opinions on the Awareness Level of Students/Graduates on Green Office Practices in Office Management

Themes	Examples of Direct Quotations	Frequency
Low	I have not observed such awareness unless the graduates either have a special interest in their own field or come from families that encourage it. I think the knowledge and awareness level of the students I graduated from is low. (K8)	6
Medium	I believe that the students who graduated five years ago lack sufficient awareness because we did not discuss these concepts thoroughly. (K7) I observe that they are somewhat aware of the information they receive from social media, but they lack practical experience in its implementation. (K1)	3
Sufficient	I generally evaluate it positively. Zero waste management is implemented in our university. Recycling units are used instead of trash cans in classrooms and corridors, and students separate waste according to its type and throw it away. In this way, they both learn to be sensitive to the environment and understand the importance of recycling. Our students adapted to this process very quickly. (K15)	2

As seen in Table 2, faculty members find the awareness of students and graduates regarding green office practices in office management to be low, medium, and sufficient. However, some statements from faculty members, such as "Unfortunately, I do not know how right it is to expect awareness on such a subject when even few people are aware of it (K2)" and "Negative, because they leave without being informed (K14)," highlight that awareness of green office practices should not be expected from graduate.

When the opinions of the faculty members regarding the green office applications of the students and graduates are examined, it is emphasized that the graduates develop awareness of the subject in case of personal tendencies or family guidance. However, there is a common view that systematic information is decisive in increasing the awareness level of both students and graduates regarding green office applications. In addition, it is understood that students easily adapt to the process when the necessary guidance is provided regarding sustainability and green office applications.

4.2. Functionality of Green Office Applications in Office Management

When the opinions of the faculty members regarding green office applications in office management are examined, it is seen that the faculty members draw attention to the functions of green office applications in providing effectiveness, efficiency and spreading innovations to a wide area. Table 3 includes the opinions of the faculty members regarding the functionality of green office applications in office management.

Table 3. The Opinions of The Faculty Members Regarding The Functionality of Green Office Applications in Office Management

Themes	Examples of Direct Quotations	Frequency
Ensuring Effectiveness and Efficiency	Offices are places where energy resources are used for a very long time, and even a second of extra usage in offices causes a substantial waste of energy in total. (K5) Offices are places where paper, computers, printers, etc., technological devices, and resources such as the internet and electricity are used intensively. Green office practices are important in terms of a clean environment and preventing waste through conscious consumption. (K7)	8
Innovation Dissemination	Although green office applications seem to protect business resources, they actually protect the world's resources and assets. These applications are the basic elements that determine the well-being of the individual and society, the workplace's peace, and the competitiveness of the business. (K3) Since employees in the office spend a lot of time in the office environment, I think that they can carry their green practices outside of work in time. (K9) Although the business seems to be protecting its resources, it is protecting the world's resources and existence. These practices are the basic elements that determine the well-being of the individual and society and the business's labor peace and competitiveness. (K11) Green office practices are important not only in the field of office management but also in all areas to leave a healthier living environment for future generations. (K13)	7

As seen in Table 3, the faculty members believe that green office applications in office management serve the functions of providing efficiency, productivity, and innovation. However, there are faculty members who express the opinion that green office applications need time to spread: "I think that green office applications that start in the office can have an impact in the process (K8). There are faculty members who state that sustainability is a necessity rather than a choice at the point reached with the 21st century: "Sustainability is no longer a choice but a necessity" (K9). When the functions of green office applications in office management to increase efficiency and productivity and spread innovations are considered, the opinions indicating that time is needed to obtain effective results and that it is not possible to give up on sustainability despite the difficulties in the process are striking.

There are faculty members who state that green office practices need time to spread: "I think green of-

fice practices that start in the office may impact the process (K8). There are faculty members who state that sustainability is a necessity rather than a choice at this point in the 21st century: "Sustainability is no longer a choice but a necessity" (K9). When the functions of green office practices in office management to increase effectiveness and efficiency and to spread innovations are considered, the views indicating that time is needed to obtain effective results and that it is not possible to give up sustainability despite the difficulties in the process are striking.

When the faculty members' views on the functionality of green office practices in office management are examined, it is seen that green office practices in offices provide both effectiveness and efficiency in resource use and the spread of sustainability awareness in different areas at individual, organizational, and social levels. Faculty members believe that the importance of green office practices has increased due to offices being resource-intensive working

environments and that green office practices are a powerful tool of change that can reach large masses and future generations over time. Therefore, 21. In the face of increasing sustainability pressure as the century progresses, green office applications have become an inevitable necessity in office management.

4.3. The Role of Green Office Practices in Office Management Education

When the opinions of the faculty members regarding the place of green office applications in the education program in office management are examined, it is understood that the applications are not mentioned at all in the courses (K1, K5, K6, K8, K10, K11), and even if they are mentioned, it is not at a sufficient level (K2, K7, K9, K12, K13). The opinions regarding the fact that green office applications are not mentioned in programs are as follows: "I have never come across any mention of green office applications in the books of branch courses related to office management (office management, executive assistant, etc.)." (K5). "It may be included in the Filing and Archiving course that we talk about the Electronic Document Management System; however, we talk about it as a current application rather than sustainability or green office applications. In this case, it cannot be said that I have covered it much." (K8).

There are faculty members who express the opinion that green office practices are not sufficiently addressed in office management education: "The topics that are covered especially in the sector applications course in office management education; however, although they are in the elective pool as a separate course, they are not very common courses" (K12). On the other hand, there are colleges that take green office practices into consideration. "We added environmental awareness and social responsibility courses to the curriculum in our college's Office Management and Executive Assistant program. It was previously mentioned in the office management course" (K14). In this context, it is understood that if courses on sustainability were added to office management programs, concrete steps would be needed specifically for green office practices.

It is understood that green office practices are associated with environmental sustainability rather than economic and social sustainability (K2, K9): "When necessary, I focus on green consumption and sustainability issues. However, I have never addressed the concept of "green office" (K2). "I touch on issues such as reducing paper usage (digitalization), throwing garbage in the recycling bin, using artificial light at a minimum level by making the most of sunlight, using sensor lighting, and turning off electronic devices when not in use" (K9). Green office practices are addressed within the scope of the course (K14)

and social responsibility projects (K7) in office management education: "Green office practices were included in the subject of virtual offices. It will be included in more detail in the content of the environmental awareness course from the next semester onwards" (K14). "I address green office applications as applications in the courses with social responsibility projects in which students are the executives and participants (K7).

There are opinions (K3, K4, K15) that the courses on green office applications in office management remain at a theoretical level and cannot be supported by practice. "I think it is not given enough importance. New applications should be put into practice rather than talked about" (K4). "We cannot carry out a study on the implementation of what we explain" (K15); it is understood that education should be supported by practice. At this point, it is seen that the teaching staff needs to gain awareness and receive training on green office applications. "Unfortunately, I do not address it; however, this study raised awareness. I realized that I should spare even an hour" (K1). "I can't say that I cover it much in my classes. But I would like to receive awareness training on green offices. It would help me plan exactly what I will talk about in class" (K10).

There are some faculty members who state that there are some difficulties encountered when including green office practices in office management education: "I have difficulty finding realistic visuals when addressing the concept of "green hospitals," which we can think of as a sub-component of green office practices" (K14). "One of the difficulties encountered is that students do not have sufficient awareness and knowledge, especially about recycling" (K7).

When the opinions on the place of green office practices in office management are examined, it is understood that the concept is not addressed in the education programs, or even if it is addressed, it is not at a sufficient level. In addition, it is seen that the courses on green office practices in office management remain theoretical, cannot be supported by practice, and neither the faculty members nor the students have sufficient awareness and knowledge. In addition, green office practices in office management are addressed mainly within the scope of environmental sustainability rather than economic and social sustainability.

4.4. Green Office Practices as the Core Competence of the Office Manager

According to the views of the faculty members, the office manager should have environmental responsibility awareness, sustainability knowledge, and leadership and guidance skills regarding green office practices. Table 4 provides the views of the faculty members regarding green office practices as the basic competence area of the office manager.

Table 4. Green Office Practices as the Core Competence Area of the Office Manager

Themes	Examples of Direct Quotations	Frequency
Enviromental Responsibility Awareness	The office manager must first be aware of sustainability, the world's diminishing or misused resources, globalization, and the consequences of all this. Being aware of what they can do and the consequences of what they do constitutes the essence of the job. (K9)	10
Sustainability Information	First of all, technical knowledge is required because the efficient use of resources is important in the work done. For this, it should know technically what to do and how to do it using the least amount of resources. (K10) It is necessary to have knowledge on issues such as climate change, global warming, the power of the country in its resources, and green office examples. (K13)	9
Leadership and Guidance	The office manager should be a pioneer in actively implementing the practices, raising awareness, and emphasizing their importance. (K3) The subject should be adopted, applied, and then adapted to business life; while doing this, curiosity should be aroused, and then physical changes should be made in the office environment to create a green attitude. The green-behaving office personnel who transform attitude into behavior should be appreciated and rewarded. (K14)	8

Table 4 shows that the basic competence areas of the office manager in the context of green office applications consist of environmental responsibility awareness, sustainability knowledge, and leadership and guidance skills. Based on this, it is revealed that the office manager must have awareness, knowledge, and practical skills to be successful in green office applications in line with the views of the faculty staff. The office manager's level of awareness regarding green office applications, technical and conceptual knowledge, and leadership and guidance skills in practice come to the fore.

4.5. The Future of Green Office Practices in Office Management

There are faculty members who find the development of green office applications as a core competency area in office management impossible (K1, K8, K10, K12), who make it conditional (K14, K15), who see it as a possibility (K2, K3, K11, K13), and who think it is a necessity (K4, K5, K7, K9). Table 5 shows faculty members' views on the future of green office applications in office management.

Table 5. Faculty Members' Views on the Future of Green Office Applications in Office Management

Themes	Examples of Direct Quotations	Frequency
Impossible	As public awareness increases in Turkey, such a basic competency demand may arise from the office management discipline; however, we still need to get there. Despite intensive work in Türkiye and many other countries for years, society is not yet aware of sustainability. To put it simply, we have no idea what the recycling symbols on packaging actually mean. (K8) Unfortunately, we can't get them to accept that offices are vital for management. We are just seen as a part of bureaucracy. (K12)	4
Probability	Green practices can become one of the basic competence areas in all professions because sustainability has become a critical issue not only in terms of the environment but also in terms of business practices, corporate culture, and social responsibility. (K3) By emphasizing the environmentally and human-friendly aspects of the office management profession, it will modernize the profession both nationally and internationally and increase its quality. (K13)	4
Obligation	In my opinion, green office applications should become a core competency area in office management rather than being able to become one. Because offices serve as the foundation for both public and private establishments. The awareness of students and employees who will work in offices in each unit will contribute to society and is important for the future of our country. (K1) Public and private sector institutions are under pressure for sustainability-oriented transformation as sensitivity to the global climate crisis increases. Therefore, each of the students trained should have this competency. (K10)	4

Conditional	Maybe, but first the problem of irresponsibility must be eliminated (K14) "It may come; but for this, the contribution of only the instructors who provide education in this field will not be sufficient. Since it is a multifaceted concept, I think that the government, legislators, engineers from various fields (industrial, mechanical, civil, metallurgical, materials, etc.) and architects should also make intensive efforts in this regard in order to increase the applications made throughout the country" (K15).	2

As seen in Table 5, faculty members have different approaches to making green office applications a core competency area in office management. While some faculty members state that it is not possible for green office applications to become a core competency area in office management, others describe it as a necessity. However, some faculty members define green office applications as a "possibility" for becoming a core competency in office management, while others believe it can be achieved under certain conditions.

Among the suggestions made by faculty members to increase green office applications in office management are providing training (K2, K5, K7, K8, K10, K11, K12, K13), adding sustainability-related courses to education programs (K2, K3, K5, K7, K14, K15), carrying out projects (K5, K6, K8, K12), organizing conferences (K1, K5, K7), establishing an environmental club (K13), etc. In addition, faculty members emphasize that the process should be supported with social activities such as tree planting days (K13) and waste collection competitions (K13). In fact, among the faculty members' opinions, there is an emphasis that public institutions and organizations should establish a reward system (K15) to encourage sustainability and green office practices.

5. Conclusion and Recommendations

Faculty members concentrates their awareness of green office practices in office management within the context of environmental and economic sustainability. Green office practices are associated with basic sustainability functions such as efficiency in resource use, environmental sensitivity, and corporate responsibility. However, the emphasis on social sustainability remains indirect and limited. This situation shows that the social dimension of sustainability is neglected and the sensitivity in this area is not at a sufficient level.

Ong, Yusof, and Osmadi (2021), who revealed the difficulties of green office applications, highlight the low level of awareness on the subject as one of the basic elements that needs to be improved. However, the difficulties of green office applications mentioned in the study include budget and resource limitations, lack of experts, and structural factors. Based on this, in addition to increasing awareness of green office applications, there are structural and systematic obstacles that need to be overcome.

However, when the situation is considered based on the research results, it is not possible to focus on solving structural and systematic obstacles in the current conditions, where awareness of even one of the basic dimensions of sustainability is low.

Faculty members attribute the awareness of students and graduates regarding green office practices to individual interest and family guidance and state that there is a need for systematic information and guidance. This indicates that office management education programs should be strengthened with a focus on sustainability. In line with this result of the research, Adomßent, Grahl & Spira (2019), who investigated the ways to make campuses sustainable, revealed that in addition to the lack of education on sustainability, systematic structures that create awareness are inadequate. Similarly, Altınöz and Öztürk Başpınar (2024) mention that education programs should be updated and systematic awareness studies should be conducted to develop sustainability awareness.

Faculty members state that green practices in office management can significantly contribute to spreading sustainability awareness because offices are resource-intensive work environments, and these practices have the potential to reach large audiences over time and be passed on to future generations. At this point, Adomßent, Grahl & Spira (2019) emphasize that the spread of sustainability should be implemented based on certain criteria. In fact, Geng, Lin, and Zhu (2020) attach importance to effective monitoring of the process and regular measurement and evaluation in the context of quality-efficiency-experience as much as starting green applications. Similarly, Halıcıoğlu, Demirkapı, Gürel, and Kasul (2023), who evaluated green office applications with Pareto analysis, stated that the process cannot be carried out effectively without receiving feedback from users and that training should be provided detailing quality standards in addition to information.

Education, curriculum updates, projects, conferences, environmental clubs, and reward systems are among the suggestions developed by faculty members to increase green office practices in office management. In addition to formal methods, social activities such as tree-planting days and waste collection competitions are steps that increase awareness of green office practices. Kavgacı and Erkmen (2021) conducted a study on green human resources

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management and showed that employees whose environmentally sensitive behaviors were rewarded actively participated in the process. Monfared and Sharples (2011), who addressed the perceptions of practitioners regarding green building practices, argue that sustainability is not possible if active participation and belonging are not ensured. At this point, if communication strategies appropriate to the user profile are not developed and technical support is not provided when needed, there is a risk that the practices will remain on paper (Pei, Lin, Liu & Zhu, 2015). At this point, the study conducted by Simons, Robinson, and Lee (2014) to determine the qualities of green offices revealed that green practices are preferred for their individual comfort and health rather than their sensitivity to the environment. As can be seen, the sustainability of the impact of green office applications depends on the strengthening of education, application quality, and social awareness together.

- In office management education, green office applications remain theoretical, are not supported by practice, and are not sufficiently addressed. However, the awareness and knowledge level of faculty members and students is not sufficient. According to faculty members, to be aware of and have knowledge about green office applications in office management, technical and conceptual knowledge as well as leadership and guidance skills are needed. The opinions of faculty members differ on whether green office applications should be included among the basic competencies of the office manager. While some faculty members define this as a necessity, some attribute it to the realization of certain conditions, while others think it is not possible. Based on the research results, recommendations have been developed for policymakers, practitioners, office management faculty members, and researchers. Suggestions for policymakers are as follows:
- Sustainability themes should be made compulsory courses in vocational training programs that will provide added value in the spread of practices such as office management to include sustainability in educational programs.
- Core competencies related to environmental responsibility, economic sustainability, social sustainability, and leadership should be defined in occupational definitions that will provide added value in the spread of practices such as office management.
- Sustainability coordination centers that monitor, support, and report green office practices should be established in universities.
- Funding and incentive mechanisms that provide infrastructure, training, and budget for green office practices should be established.

- Award, monitoring, inspection, and tracking platforms that encourage joint sustainability efforts between institutions should be established.
- Sustainability criteria should be included in quality criteria in higher education, and field-specific evaluation guidelines should be created for their follow-up.

The recommendations developed for practitioners are as follows:
- Step-by-step sustainable office guidelines and standard procedures should be determined.
- Sustainability-focused orientation, seminar, and certification programs should be designed.
- Monitoring and feedback systems that actively evaluate the effectiveness of applications based on user opinions, surveys, Pareto analysis, etc. should be established.
- Socially interactive sustainability applications (tree planting days, waste collection competitions, etc.) should be implemented.
- Successful sustainability and green office applications should be presented to the attention of those concerned via digital platforms and given a guiding quality.
- Office physical/architectural arrangements should be made by taking sustainability design principles into consideration.

The recommendations developed for office management faculty members are as follows:
- Environmental, economic, and social dimensions of sustainability should be addressed in a holistic manner in courses.
- Simulations, trips, etc.: application-based learning environments should be created.
- In addition to providing students with information about sustainability, skills that support leadership and guidance skills should be emphasized.
- Green office-focused student projects, competitions, and social responsibility activities should be carried out.
- Sustainability-focused interdisciplinary joint courses and projects should be carried out.
- The suggestions developed for researchers are as follows:
- Studies should be conducted on social sustainability dimensions that are neglected in current studies.
- Researchers should investigate application methods and techniques of green office practices within the scope of sustainability in office management.
- Current studies addressing sustainability practices in higher education should be conducted.

- Researchers should conduct studies examining how green office practices interact with social and institutional culture.
- Priority should be given to studies that make future-oriented inferences on how current developments in information and communication technologies will shape green office practices.

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