

## **Evaluating Practices of University Student Hostels towards Meeting the Requirements of Sustainable Development**

**Tamer Amer<sup>1</sup>**

<sup>1</sup> Faculty of Tourism and Hotels, University of Sadat City

### **Abstract**

University student hostels not only can promote sustainability by adopting its features on their practices, but they also can develop the culture of sustainability in society. That is why hostels can be considered as small cities due to their large size, population, and the various complex practices taking place on their operation. This study aims to evaluate economic, social, and environmental practices of university student hostels towards meeting the requirements of sustainable development (SD). Data were collected by developed questionnaire. Originally, 180 questionnaire forms were distributed to employees of different six university student hostels. Only 105 questionnaires were returned giving a response rate of 58.3%. Data were statistically analyzed by using frequencies & percentages, Spearman correlation coefficient, and regression analysis. The findings of the study indicate that the majority of economic, social, and environmental requirements are not being implemented with sufficient strength into hostels' practices. The factors influenced sustainability of practices was all positively confirmed by findings of the empirical study. Awareness of management had the highest influence on sustainability of practices, followed by leadership & management attitude, participation willingness of employees, and finally the contribution of stakeholders. In addition, the most challenges and obstacles encounter hostels were financial challenges, lack of awareness, the shortage of information on programs and fixtures associated with SD, and insufficiency of current legislation. The study concluded providing a framework and some recommendations to implement sustainability into hostel operations.

**Key words:** Sustainable development; sustainability; university student hostels.

### **1. Introduction**

The availability of university student hostels is one of the key elements students and their parents are concerned about when enrolling in a university. The significance of hostels as a major determinant of man's welfare, life sustenance and survival cannot be over emphasized. It has and will always be a prime concern to individual, family, and community. Students take hostels into consideration before choosing the faculty they intend to attend among other considerations (Ajayi et al., 2015).

Hostel is referred to a place where student can stay when their residence is located far from the educational institution and which is considered essential to students' needs. It is built with some institutional or formal characteristics and where students have access to the university recreational facilities (Khozaei et al., 2010).

It is essential for a hostel to provide the most important and basic infrastructure facility needed by the student. Such facilities include , readily room, toilets, running water, electricity, canteen, and a recreation area provision of these facilities in good working order is something that is not always readily available (Abramson, 2009; Aluko, 2011).

According to Suki & Chowdhury (2015), parents may be less worried when their students live at hostel as there is higher security and safety than at off hostel. Residing in hostel, faraway from family for a long period of time, is an enduring experience for young students. This new university life style enlivens personal character, and aid in forming patterns Oof behavior, thought, and imagination which should lead to a fulfilling living experience, provides an opportunity to learn how to live independently, compromise with other students and roommates, share space and facilities and so forth (Hassanain, 2008; Khozaei et al., 2010). Life in a sustainable hostel makes students more independent as they share accommodation with at most four students or more at one time. Sustainable hostel life also makes them smart, active, disciplined, tolerant and socialized with other students and roommates, sharing space and facilities (Khozaei et al., 2010).

Lynndsay (2015) mentioned that, sustainable hostels have been one of the biggest developmental trends within the last decade. Alshuwaikhat & Abubakar (2008) mentioned that, the hostel is called sustainable when it boosts economic growth (economic aspect), helps toward society's progress (social aspect), and does not change its surrounded environment (environmental aspect). Ajilian (2014) emphasized that the critical role of universities in sustainable development (SD) which can help authorities to solve the respective challenges. University institutions not only can promote sustainability by adopting its features on their campuses, but they also can develop the culture of sustainability in society. That is why universities can be considered as small cities which have significant direct and indirect impact on the society and the environment, based on their size, population and activities which take place in the universities.

The concern about SD has emerged as a result of rapid growth of population, the economy and consumption of our natural resources. Due to the fact that most natural resources are limited, they will be consumed and eventually exhausted. Some examples of limited resources include: clean water, soil nutrients, and energy resources. Thus, it is essential to make good present decisions in order to avoid limiting the choices of future generations (Ajilian, 2014). The focus of this study is on SD in hostels. Although there is no empirical studies have been done in this point, the goal of the current research is to evaluate the practices of hostels towards meeting the requirements of SD, and finding the factors which affect it to increase the efficiency of sustainability practices on these Institutions. Although each university has unique (economic, social, and environmental goals and resources), they can learn a lot from each other. The obtained results from this research offer a guideline to university management to provide high-sustainable living environments of hostels in Egypt.

## **1.2 Problem of the Study**

It is a fact that sustainability is now becoming a worldwide trend. Although countries are working hard to support SD, no previous study has been conducted in Egypt to examine the implementation of it in hostels. Therefore, this study investigates the current situation of sustainability in these universities by exploring some factors. Therefore, this study seeks to fill the existed gap in the literature. There are few universities in developing countries, are adopting necessary adjustments to diminish the negative impact of hostel operations on the environment and integrate sustainable principles into their practices. Even in the few cases where attempts are being made to implement some sustainable principles, the endeavors are highly centralized without other stakeholders' involvements (students, employees, suppliers, governmental authorities), which make these endeavors insufficient to contribute to the transition to a sustainable society (Yuan & Zuo, 2013). Thus, several researchers have called for a comprehensive attitude "whole-of-university" to achieve sustainability and to revise how higher education can address sustainability issues not only within practices of hostels, but also via community outreach, through the participated university stakeholders (Beringer & Adombent, 2008).

On the other hand, the researcher noted that there are some shortcomings in university-level facilities in terms of SD. Managers of hostels do not put SD plan as a main goal, and their employees do not have a positive culture towards implementing features of it (economic, social, and environmental). Hence the problem of the study was formulated in the following question:

How can hostel contribute to SD?

This problem includes the following sub-questions:

- What are implemented practices of hostels to achieve SD?
- What are challenges and barriers encounter hostels in implementing SD?

## **1.3 Importance of the Study**

It is a fact that sustainability is now becoming a worldwide trend. Although countries are working hard to support SD, no previous study has been conducted in Egypt to examine the implementation of it in hostels. Therefore, this study investigates the current situation of sustainability in these universities by exploring some factors. Therefore, this study seeks to fill the existed gap in the literature. We can see easily that the fastest growing segment of different fields has something to do with sustainability. In tourism & hospitality sector, eco-tourism and social responsibility attitude is a hot topic; in energy sector, it is solar energy and wind power; in agriculture, it is organic farming. Some may say that sustainability is now a survival factor for organizations and is being seen as a part of their strategic plan to securing economic development, social equity and environmental protection at once. In addition, current generation must guarantee the right of the future generation to environmental resources, and the aim of them should be to support sustainability. In this context, the hostel should perform an effective role in promoting SD, which will benefit the universities in achieving its goals towards the society.

Universities have a social responsibility to address environmental issues, and they can play unique role in a sustainable society. In other words, SD practices of hostels could make a long-term and wide contribution to society by educating students, in addition to direct and short-term contributions such as reducing waste and saving energy (Uehara & Ynacay-Nye, 2018).

#### **1.4 Objectives of the study**

1. Attracting the attention of hostels managers not currently engaged in sustainability to become aware of it to save money, society, and environment.
2. Identifying the leadership and attitude of management towards SD.
3. Measuring awareness of hostels' managers in terms of SD.
4. Exploring the role of stakeholders towards SD
5. To know the extent to which hostels contribute in achieving SD dimensions (economic, social, and environment).
6. Identifying challenges and barriers encounter hostels to implement the requirements of SD.
7. Providing a framework that can be used effectively in supporting hostels sustainability.

#### **1.5 Hypotheses of the study**

**H1:** Awareness of hostels' managers about the concept and requirements of SD affects the implementation of sustainability practices.

**H2:** Leadership and managers' attitude towards SD affects the implementation of sustainability practices.

**H3:** Employees willingness to participate in sustainability efforts affects the implementation of sustainability hostel practices.

**H4:** The contribution of stakeholders (students, employees, suppliers, and governmental authorities) affects the implementation of sustainability practices.

**H5:** Challenges and barriers encounter hostels management affect its ability to respond to sustainability of practices.

## **2. Review of literature**

### **2.1 The Concept of University Student Hostel**

According to Hassanain (2008), Al-Azhar University in Cairo is a pioneering example of universities that provided residential facilities to their student in Egypt. Since its establishment in 969 AD, it has provided a whole system of education including a theological and educational field to students' living-on-campus. The initiative of campus hostels as separate facilities dates back to the fourteenth century. The dominant school of thought at that time is that a college or a university is responsible for the total training of the individual, including social and personal education. A new description for the term university has then emerged.

According to Sawyerr & Yusof (2013), the system of hostel has been supported widely by professors at colleges who believe in the English collegiate tradition of being concerned with the “whole man”. The New College hostels at Oxford – about AD 1400 – provided for a complete accommodation of teaching and living requirements. The same discipline was then followed by Cambridge, Harvard and Yale. Since that time, colleges and universities then started to embark on an energetic hostel programs to supplement their educational environments.

In addition, Hassanain (2008) and Sawyerr & Yusof (2013) stated many reasons for providing hostel facilities, including:

- The absence of university hostel may constitute one factor in lowering the academic performance of students.
- Hostel promotes and creates institutional loyalty and eventual alumni support.
- Adequately planned hostel facilities foster mutual interests and desirable educational outcomes among students. Suitable hostel facilities provide cooperation, security, responsible citizenship, involvement, intellectual stimulation, mutual composition and inspiration.
- Hostel helps enlarge a student’s awareness and knowledge of disciplines through contacts with roommates of different backgrounds who specialized in other fields of study.
- Hostel is intended to make students reach the intellectual competence they need in forming a character and personal development which will lead to a fulfillment of living experience.
- Hostel emphasizes solidarity and unity among student population. It is the major common denominator that attracts and unites students involved in different fields of studies, besides sports and cultural activities.

According to Sawyerr & Yusof (2013), various names have been referred to the hostel by different countries and authors. The Western countries attributed it as residence (Amole, 2005; Wiens, 2010) while La Roche et al. (2010) viewed it as student dormitory. On the other hand, Martin and Allen (2009) referred to hostel as campus apartments. Meir et al. (2007) called it as student accommodation units, and college housing as stated by (Abramson, 2010). Hostel is considered as an integral part of facilities provided by higher learning institutions to enable students expand their intellectual capabilities, as such Amole (2009) views hostel to be made up of bedroom units including other shared utilities such as bathrooms, kitchens, toilets, recreation rooms and canteens which can be situated either on each floor or block or for the entire student hostel accommodation. In addition, Sawyerr & Yusof (2013) views hostel as a place that offer privacy and security in which the management can meet the needs and expectations of students by renting such spaces to them.

From all mentioned above, a hostel can be considered as a set of accommodation provided by university management within the universities to accommodate students with obligations and rules introduced in place to adjust the behaviors of students and they must pay fees to use these accommodations. Hostel includes of a particular type of building which as well as being a dwelling for students attending the university ought to present extra significant necessity, i.e. an atmosphere that is comfortable and adjustable to academic learning and success. To succeed in this regard, the hostel amenities, as a designed environment must be able to provide the needed indoor environmental criteria that affect the efficiency and productivity of its occupants (Sawyer & Yusof, 2013). The main point in all hostel facility is the provision of dwelling, protection from the environmental changes of the weather such as wind, sun, rain, and dust. In addition, to include the social aspects of being able to interact and socialize with friends.

Therefore, these tend to be the reason for the demand of hostel facilities and services. This was further supported by (Curley, 2003; Hassanain, 2008; and Willoughby et al., 2009) who claimed that hostels should be a convenient place that encourages friendship and security among the students; and at the same time should bring about a sense of sharing; and this in return will enable students to develop social cohesion and become responsible citizens.

## **2.2 The Concept of Sustainable Development**

Over the last two centuries, economic growth and the advancements in science and technology have raised the level of human consumption. World populations now demand more and better products of a wider variety more frequently and in greater quantities. At the same time world population has grown at an exponential rate. As a result, nonrenewable natural resources are being depleted, and as a result the environment is being degraded in an alarming manner and scale. This has raised concerns about the future of the world (Al-Shihri, 2013). The word of sustainability is originally related to the ecology field, referring to the use of natural resources in a way that does not harm the environment. Since the first appearing of sustainable idea, there are various debates and many different definitions about it (Giang, 2014).

According to Hitchcock & Willard (2009) and Finlay (2010), concern for sustainability in the general public rose in the early 1970s as awareness that degradation of the environment detrimentally affected international goals of prosperity and economic justice grew. The 1987 report of Brundtland define SD term as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Though it is still a confusing topic and remains many contradictions, there is no doubt that in order to obtain sustainability, the organizations have to optimize three factors: economic, social, and environmental. It is easy to see the interdependence between those factors (see Fig. 1). There can be no healthy society without the supportive of a healthy economic and the resources will be washed-out with the increase of social ills.

SD includes three main dimensions that are optimized with each other; economic, social, and environmental. In practices of organizations, growing business through sustainability implies that development be viewed from a societal and an environmental perspective. Sustainability, therefore, requires harmony between economic sustainability, social sustainability and environmental sustainability. Also, SD warrants a combined focus on three areas: People, Planet and Profit. From a development point of view this can be paraphrased as People, Planet and Progress (Silvius & Schipper, 2010). In order to be sustainable, development should refer to quality of life for all sections of society (people) and minimal disruption of the environment (planet), as well as economic growth (progress). The concept of SD clearly warrants that the process of development must be economically viable, socially equitable, and environmentally bearable (Al-Shihri, 2013).

### **2.3 The Role of Universities in SD.**

Abubakar et al. (2016) mentioned that the studies investigated environmental sustainability and its role in promoting university sustainability are largely focused in the developing countries outside the Middle East. Examples of these studies were conducted in several universities such as in USA (Earl et al., 2003; Savanick, Strong & Manning, 2008; Emanuel & Adams, 2011). In Germany (Barth & Timm, 2010), in Australia (Zeegers & Francis Clark, 2014), and in UK (Chaplin & Wyton, 2014).

According to Lozano et al. (2015), not just for towns and cities, incorporating sustainability into university institutions were become necessity given the important environmental impacts of complex activities and practices taking place on hostels of universities, whose costs need to be avoided, hence universities are no longer overlooked in terms of environmental responsibility. The role of universities in promoting SD have been focused on several declarations such as the Declaration of Talloires in 1990, Agenda 21 in 1992, the Declaration of Kyoto in 1993, Global Partnership of Higher Education for Sustainability in 2000, the Declaration of Luneburg in 2001, the declaration of Sapporo in 2002, the Declaration of Graz in 2005, the Declaration of Abuja about the SD in Africa in 2009, the Higher Education Sustainability Initiative (HESI), as well as the Decade of UN for Education for SD. According to UNESCO, education for SD fosters a process of learning how to make decisions that consider the long-term future of the ecology, equity, and economy of all communities. As such, universities worldwide are now becoming more proactive in becoming sustainable and in promoting sustainability via teaching and research, hostel operations, and community outreach (Abubakar et al., 2016).

Cole & Wright (2003) stated that, a sustainable hostel is a community that acts upon its local and global responsibilities to protect and enhance the health and wellbeing of humans and ecosystems and advances some ways of addressing our present and future ecological and social challenges.

Other scholars such as (Alshuwaikhat & Abubakar, 2008) consider a sustainable hostel as a healthy environment with an efficient environmental management and effective economy based on resource and energy conservation and reduction of wastes, and encourage social justice and equity in its practices and publish these valuable issues at community, national, and global levels.

These definitions as Nikpour & Pooladkhai (2012) indicated that sustainability of hostels require inclusion of SD features not only into its practices, but also in community services. Hostel sustainability is also not to be achieved without incorporating such features of SD features as energy efficiency in buildings and operations, sustainable using of water, resource conservation, efficient waste management, equity, and decreasing environmental pollution into hostel operations. On the other hand, Savanick et al. (2008) and Cortese (2010) assured that hostel sustainability requires participatory training programs that motivate and empower students, employees, and the community to change their behavior and take action for sustainability.

### **3. Methodology**

The nature of methodology used in this research was descriptive study because the data were obtained using a cross-sectional survey from a predetermined population at a single point in time.

#### **3.1 Participants**

The study included 180 employees as a convenience sample from six hostels of the following universities; university of Sadat city (Sadat city), Menoufiya university (Shebien El-kom), Mansoura University (El-Mansoura), Kafr El-Sheikh University (Kafr El-Sheikh), Tanta University (Tanta) and Al- Azhar University (Alexandria branch). The selected employees were asked to complete the survey that was developed for this study. A total of 105 (58.3 per cent) employees responded correctly to the survey.

#### **3.2 Instrument**

Indeed, the questionnaire is an effective data collection tool when the researcher identifies exactly what is required and how to analyze the interested variables (Abubakar et al., 2016). So, the questionnaire with (53 items) was developed to collect data from the employees of hostel, it was structured into the following key areas:

1. Awareness of management.
2. Leadership and Management attitude towards SD.
3. Participation willingness of employees.
4. Sustainability of practices (Economic, Social, and Environmental).
5. Stakeholder's contribution.
6. Challenges and barriers.



The survey consisted of seven sections: the first one included 4 items that measure awareness of hostel's management about the concept of SD, the second section included 10 items that measured the leadership and management attitude towards SD, the third section included 6 items that measure the willingness of employees to participate in sustainability efforts, the fourth section included 23 items that measure the status of economic, social, and environment practices of hostel as a dimensions of SD, the fifth section included 4 items that measure the contribution of stakeholders in achieving SD, the last section included 6 items intended to identify types of challenges and barriers to advocacy of sustainability.

The survey used a five-point Likert scale from 1 to 5 (1= strongly disagree to 5= strongly agree). The majority of the questionnaire items were selected from the work of Lozano (2012), Fernando (2012), Aburgre (2014), Kanyi (2015), and other items were developed by the researcher. The researcher asked three professors in environmental and social sciences to review the survey and judge the content validity as well as the suitability of each item to each scale within the survey. The final survey was reviewed on the basis of their feedback; some items were deleted and others were modified. The researcher conducted a pilot study that consisted of a sample of 15 employees. An internal consistency reliability coefficient (alpha) was calculated for each scale and for the whole survey as shown in the following section.

### **3.3 Data analysis procedures**

A descriptive analysis including frequencies and percentages, spearman correlation and simple linear regression were also conducted to test the hypotheses of the study.

## **Results and Discussion**

### **4.1 Reliability analysis**

The reliability of the scales was tested by using Cronbach' alpha coefficient to measure internal reliability; its value ranging from 0 to 1, and higher values indicate greater reliability. Cronbach' alpha for this study was higher than 0.77 for the individual constructs and 0.83 for the entire survey as exhibited in table (1). These values according to Tavacole & Dennick (2011) are accepted.

**Table (1): Coefficient of reliability and validity of the survey**

<b>Constructs</b>		<b>No. of items</b>	<b>Cronbach's Alpha</b>
<b>(Independent variables)</b>	Awareness of managers	4	0.773
	Leadership & managers' attitude	10	0.784
	Employees willingness	6	0.811
	Stakeholders contribution	4	0.803
	Challenges and barriers	6	0.896
<b>Dependent variable</b>	Sustainability of Practices (economic, social, environment)	23	0.829
<b>Overall survey scale</b>		<b>53</b>	<b>0.830</b>

## 4.2. Descriptive Data Findings

In this section descriptive data will be discussed for the main practices of hostels. These practices include:

### 4.2.1 Economic practices

The opinions of respondents concerning economic practices are presented in the following Table (2). There is an obvious shortage of using low flow taps, showers/toilets at an average of 2.53. This may be because the hostel management doesn't care about using low flow devices. For the same reason, there is an indifference to the use LED lighting, and the excessive operation of electrical appliances such as air conditioners, fans, and lamps (3.12, 2.80). This may be due to the lack of an item in the budget of hostel to purchase these devices, in addition, there is no plan to motivate employees and encourage students to reduce using of water and electricity. This may be due to the managers of these institutions don't recognize the benefits for hostel and society as a whole because of limited sustainable culture and awareness they have.

**Table (2): Economic practices of hostel**

Items	SD		D		N		A		SA		Total		Mean
	F	%	F	%	F	%	F	%	F	%	F	%	
The management is trying to use LED lighting.	9	8.6	50	47.6	4	3.8	37	35.2	5	4.8	105	100	2.80
Employees turn off lamps, fans, electronic devices and air conditioning when not needed.	1	1.0	45	42.9	8	7.6	42	40.0	9	8.6	105	100	3.12
The natural light is utilized.	3	2.9	9	8.6	2	1.9	66	62.9	25	23.8	105	100	3.96
Furnishings and fittings are purchased locally.	1	1.0	4	3.8	22	21.0	59	56.2	19	18.1	105	100	3.86
Low flow taps, showers/toilets are used	21	20.0	36	34.3	24	22.9	19	18.1	5	4.8	105	100	2.53
<b>Overall Mean</b>													<b>3.25</b>

### 4.2.2 Social practices

The results of table (3) shows that the respondents were not satisfied with the salaries which are not consistent with the level of salaries in the Egyptian market (1.49). This may be due to the increase of salaries in other jobs compared to salaries of universities in general, to the imbalance between duties and tasks of work and the salary, or to the increasing level of prices in the recent years. This low salaries make employees reluctant to comply with the principles of SD in daily practices, which they consider it as additional effort and not directly beneficial to them. As well as the shortage of provided services to employees such as appropriate housing, free meals, and transport (1.81) which may have an impact on the interest of employees to meet the economic and environmental requirements of SD; this may be due to the failure to allocate an appropriate amount of money of the budget to those services.

**Table (3): Social practices of hostel**

Items	SD		D		N		A		SA		Total		Mean
	F	%	F	%	F	%	F	%	F	%	F	%	
The student hostel depends on local employees	2	1.9	1	1.0	4	3.8	65	61.9	33	31.4	105	100	4.10
Women are involved in working activities.	3	2.9	26	24.8	1	1.0	49	46.7	26	24.8	105	100	3.55
The management treats employees in a fair manner.	27	25.7	28	26.7	18	17.1	26	24.8	6	5.7	105	100	2.48
The salary commensurate with rates in the market.	66	62.9	26	24.8	6	5.7	4	3.8	3	2.9	105	100	1.49
The management provides a good working environment, with a fair incentive system.	15	14.3	47	44.8	16	15.2	25	23.8	2	1.9	105	100	2.44
There is a good interaction with students.	2	1.9	33	31.4	6	5.7	53	50.5	11	10.5	105	100	3.26
The management provides some benefits to employees (free meals, transport, housing, etc.).	37	35.2	51	48.6	9	8.6	5	4.8	3	2.9	105	100	1.81
The management allocates some programs to develop employees' skills.	28	26.7	50	47.6	6	5.7	15	14.3	6	5.7	105	100	2.14
Employees are involved in decision-making process.	9	8.6	45	42.9	6	5.7	41	39.0	4	3.8	105	100	2.76
<b>Overall Mean</b>													<b>2.67</b>

The results also show that there is a shortage in training programs to develop employee skills (2.14); these skills may improve the practices of employees in meeting SD requirements, especially in the economic and environmental dimension; this may be due to the culture of management that may not recognize the feasibility of training programs, or few institutions that provide these programs, or to the high cost of it. Regarding the justice with employees and the quality of incentive system, the results declared that the management does not provide a good working conditions and the management doesn't treat employees in a fair manner (2.44, 2.48). The results also indicated that the employees don't participate in decision-making process (2.76), which in turn reduces employees' loyalty and creates negligence in the working practices. At the same time, the interaction between employees and students was not effective (3.26) as stated by respondents.

### **4.2.3 Environmental practices**

The results tabulated in the following table (4) indicated that the management does not recommend not using one-time products (2.20). This is due to a lack of knowledge of managers concerning environmental protection, or because managers do not care about rationalizing the financial budget. In addition, hostels' managers don't have any system to convert kitchen waste to compost (1.74). In addition, they do not have a specific plan to generate self-income for the place or to not expand the gardening of the place.

**Table (4): Environmental practices of hostel**

Items	SD		D		N		A		SA		Total		Mean
	F	%	F	%	F	%	F	%	F	%	F	%	
The management recommends not using one-time products.	28	26.7	32	30.5	22	21.0	21	20.0	2	1.9	105	100	2.20
Large bags were used to avoid waste and vacuum.	2	1.9	30	28.6	47	44.8	19	18.1	7	6.7	105	100	2.79
Containers that can be returned for refilling were used.	6	5.7	29	27.6	47	44.8	17	16.2	6	5.7	105	100	2.68
The management recommends to use both sides paper.	6	5.7	29	27.6	43	41.0	21	20.0	6	5.7	105	100	2.72
The management recommends refilling the print cartridges and recharging the batteries.	0	0.0	2	1.9	30	28.6	67	63.8	6	5.7	105	100	3.43
The management communicates with the organizations of recycling metals, plastics, glass, paper and cardboard.	4	3.8	31	29.5	50	47.6	16	15.2	4	3.8	105	100	1.95
The management recommends using kitchen waste as compost.	5	4.8	39	37.1	50	47.6	10	9.5	1	1.0	105	100	1.74
The management is trying to detect leak water with piping and taps for repairing it.	9	8.6	26	24.8	4	3.8	57	54.3	9	8.6	105	100	2.69
The management is concerned with bathrooms maintenance.	10	9.5	27	25.7	4	3.8	50	47.6	14	13.3	105	100	2.39
<b>Overall Mean</b>													<b>2.51</b>

The results indicate that the university management does not care about the waste recycling process. There is no communications with waste recycling organizations (1.95) while we note that the activity of hostel produces huge amounts of waste; this may be due to the lack of proper sustainability culture among the leaders of these institutions. The results reveal that employees are not keen to use both sides paper, and this may be due to the universities are providing papers in large quantities without accountability, which in turn encourages misuse. The results show that buying large bags and moving away from small one is not the target of hostel management (2.79); the management purchases available products in the markets without searching for large packages that provide financial saving for budget. It is cleared from previous results that social practices of hostels are the most neglected SD dimension (2.72). This may be due to the SD culture shortage of employees in the hostels, or perhaps due to the lack of a SD plan presented by university management. The Higher Education Institutions should cooperate with each other to formulate and provide a comprehensive SD plan that is compatible with local and national requirements to improve practices of hostels.

**4.2.4 The role of stakeholders toward SD**

Table (5) shows that suppliers have no role in directing hostel practices toward adopting the principles of SD, with an average of 2.37, which reflects disagree according to the scale of analysis. In addition, employees and students according to respondents are partners in achieving sustainability requirements (2.54).

**Table (5): The role of stakeholders towards SD**

Items	SD		D		N		A		SA		Total		Mean
	F	%	F	%	F	%	F	%	F	%	F	%	
The hostel periodically receives environmental and social inspection from official organizations.	17	16.2	38	36.2	16	15.2	34	32.4	0	0.0	105	100	2.63
The hostel meets the aspirations of government authorities in regard of environmental and social requirements.	29	27.6	34	32.4	11	10.5	30	28.6	1	1.0	105	100	2.42
Employees and students are partners in achieving sustainability requirements.	5	4.8	15	14.3	9	8.6	59	56.2	17	16.2	105	100	2.54
Our suppliers are committed to the principles of SD.	4	3.8	6	5.7	75	71.4	18	17.1	2	1.9	105	100	2.37
<b>Overall Mean</b>													2.49

According to findings, the hostels didn't receive periodical committees for reviewing and inspection of environmental and social practices (2.63). As a result, the managers of these establishments didn't fulfill their duty to meet the aspirations of the governmental authorities in the environmental and social dimensions of SD (2.42). This reflects the ineffective role of governmental authorities through current legislation in directing university managements towards meeting the requirements of SD.

#### 4.2.5 Challenges and barriers encounter hostels

As shown in table (6), respondents indicated that financial challenges is the most important challenges and barriers encounter hostel managers to implement the principles of SD in practices (4.17). On the other hand, the respondents indicated four items as challenges and barriers to construction of sustainability in the hostels, including: the lack of awareness among employees (4.06), the shortage of information on programs associated with SD (3.98), in addition, the nature of the building and fixtures (3.93), more details about these challenges and barriers are presented in the following table (6).

**Table (6): Types of challenges and barriers**

Items	SD		D		N		A		SA		Total		Mean
	F	%	F	%	F	%	F	%	F	%	F	%	
Lack of awareness among employees towards SD.	0	0.0	6	5.7	4	3.8	61	58.1	34	32.4	105	100	4.06
The nature of the building and the fixtures hinder to move towards SD.	0	0.0	11	10.5	14	13.3	51	48.6	29	27.6	105	100	3.93
The shortage of information on programs associated with SD.	0	0.0	7	6.7	16	15.2	45	42.9	37	35.2	105	100	3.98
Financial resources hinder the university hostel to move towards SD.	0	0.0	12	11.4	18	17.1	44	41.9	31	29.5	105	100	4.17
There is a lack of governmental support programs for hostel in terms of SD.	3	2.9	5	4.8	26	24.8	42	40.0	29	27.6	105	100	3.84
Current legislation does not encourage moving towards SD.	0	0.0	3	2.9	29	27.6	45	42.9	28	26.7	105	100	3.93

### 4.3 Relationship between Variables of the Study

It is observed from the table (7) that implementing requirements of SD in hostels (sustainability of practices) share a high statistically significant and positive relationship with awareness of management ( $r=0.778$ ,  $p<0.01$ ), leadership and management attitude ( $r= 0.649$ ,  $p< 0.01$ ), willingness of employees ( $r= 0.677$ ,  $p< 0.01$ ), hostel stakeholders ( $r=0.666$ ,  $p<0.01$ ), challenges and barriers ( $r= -0.554$ -,  $p< 0.01$ ). On the other hand, challenges and barriers encounter hostels are the only factor share negative relationship with implementing requirements of SD

**Table (7) Correlation matrix of the study variables**

	1	2	3	4	5	6
<b>1. Sustainability of Practices (economic, social, environmental)</b>	1					
<b>2. Awareness of Managers</b>	.778** .000 105	1				
<b>3. Leadership and managers' attitude</b>	.649** .000 105	.864** .000 105	1			
<b>4. Contribution Willingness of Employees</b>	.677** .000 105	.799** .000 105	.731** .000 105	1		
<b>5. Hostel Stakeholders</b>	.666** .000 105	.834** .000 105	.800** .000 105	.895** .000 105	1	
<b>6. Challenges and barriers</b>	-.554** .000 105	-.550** .000 105	-.385** .000 105	-.508** .000 105	-.436** .000 105	1

### 4.4 Testing Hypotheses

To investigate the impact of the main factors on the provision of sustainable practices, simple linear regression was conducted as follows:

#### 4.4.1 Awareness of managers

Table (8) shows the impact of hostel management awareness on achieving SD requirements in daily practices. As illustrated from the table (8), the value of adjusted R2 is (0.582), F value equal 145.820 and significant at 0.000, pointing that 58.2% of total variance in meeting requirements of SD in daily practices is explained by awareness of hostel management. This result is consistent what had been concluded by Al-Naqbi & Alshannag (2018) as awareness and diffusion of knowledge is essential factor for achieving sustainability requirements in daily practices of hostels. This means that student hostel managers should improve their knowledge and awareness about the concept, objectives, and requirements of SD. This result supported (H1): Awareness of university hostel management about the concept and requirements of SD affects the implementation of sustainable practices.

**Table (8): The Impact of awareness of managers on sustainability of practices**

<b>R</b>	<b>R-Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		
.766 <sup>(a)</sup>	.586	.582	.3638		
<b>ANOVA<sup>(b)</sup></b>					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	19.304	1	19.304	145.820	0.000 <sup>(b)</sup>
<b>Residual</b>	13.636	103	0.132		
<b>Total</b>	32.940	104			
<b>Coefficients<sup>(a)</sup></b>					
	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
<b>(Constant)</b>	2.620	.070		37.342	.000
<b>Awareness of managers</b>	.333	.028	.766	12.076	.000

a. Dependent Variable: Sustainability of practices

#### 4.4.2 Leadership and management attitude

It can be concluded from regression analysis that the value of adjusted R<sup>2</sup> is 0.494 and F= 102.402 (p< 0.01) that indicate the effective leadership and active attitude provided by university hostel management account for 49.4% of the variance in implementing sustainability practices in hostels (see table 9). In other words, the management should provide support and diffusion of knowledge for achieving sustainability. This result is consistent with Kanyi (2015) assured that it is important for the top management to engage the employees on how they can monitor, implement and improve the operational practices to ensure that the establishment is operating sustainably. This result supported (H2): Leadership and management attitude towards SD affects the implementation of sustainability on daily practices.

**Table (9): The Impact of Leadership and managers' attitude on sustainable practices**

<b>R</b>	<b>R-Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		
.706 <sup>(a)</sup>	.499	.494	.46795		
<b>ANOVA<sup>(b)</sup></b>					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	22.423	1	22.423	102.402	0.000 <sup>(b)</sup>
<b>Residual</b>	22.554	103	0.219		
<b>Total</b>	44.977	104			
<b>Coefficients<sup>(a)</sup></b>					
	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
<b>(Constant)</b>	1.807	.129		13.964	.000
<b>Leadership and managers' attitude</b>	.465	.046	.706	10.119	.000

b. Dependent Variable: Sustainability of practices

#### 4.4.3 Participation willingness of employees

The results obtained from the Table (10) cleared that the adjusted  $R^2$  is 0.360 and F value is 59.379 ( $p=0.000$ ) that reveals the employee willingness to participate in sustainability efforts has significantly explained the 36% of the variance in sustainability of practices. Regression coefficient (B) is 0.707 (0.000) which is significantly ( $t=7.706$ ;  $p=0.000$ ) at the 1% significance level. These results indicated that employees showed willingness to support and participate in sustainability initiatives of their hostels. When employees are willing to put in effort for the achievement of the economic, social, and environmental goals for their hostels, sustainability practices will be accomplished. This result agreed with what had been reported by Kanyi (2015) that employees play an effective role in achieving sustainability.. This result supported (H3): Employees willingness to participate in sustainability efforts affects the implementation of sustainability of practices.

**Table (10): The Impact of employees' willingness on sustainability of practices**

R	R-Square	Adjusted R Square	Std. Error of the Estimate		
.605 <sup>(a)</sup>	.366	.360	.52630		
ANOVA <sup>(b)</sup>					
	Sum of Squares	df	Mean Square	F	Sig.
<b>Regression</b>	16.447	1	16.447	59.379	0.000 <sup>(b)</sup>
<b>Residual</b>	28.530	103	0.277		
<b>Total</b>	44.977	104			
Coefficients <sup>(a)</sup>					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
<b>(Constant)</b>	.665	.312	.605	2.133	.035
<b>Participation willingness</b>	.707	.092		7.706	.000
Dependent Variable: Sustainability of practices					

#### 4.4.4 The contribution of stakeholders to sustainability

The adjusted  $R^2$  is 0.254 and F value is 36.411 ( $p=0.000$ ) that reveals stakeholders of hostels has significantly explained the 26.1% of the variance in sustainability of practices. Regression coefficient (B) is 0.403 (0.000) which is significantly ( $t=6.034$ ;  $p=0.000$ ) at the 1% significance level as shown in Table (11). These results show that stakeholders of hostels (students, employees, suppliers, and governmental authorities) have an important role in achieving sustainability into practices of investigated hostels. This result supported (H4): The contribution of stakeholders affects the implementation of sustainable practices.



**Table (11): The Impact of stakeholders on sustainability of practices**

<b>R</b>	<b>R-Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		
.511 <sup>(a)</sup>	.366	.261	.254		
<b>ANOVA<sup>(b)</sup></b>					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	11.747	1	11.747	36.411	0.000 <sup>(b)</sup>
<b>Residual</b>	33.230	103	0.323		
<b>Total</b>	44.977	104			
<b>Coefficients<sup>(a)</sup></b>					
	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
<b>(Constant)</b>	1.803	.211	.511	8.545	.000
<b>Contribution of stakeholders</b>	.403	.067		6.034	.000

Dependent Variable: Sustainability of practices

#### 4.4.5 Challenges and barriers encounter hostels

Simple linear regression was conducted to investigate the impact of challenges and barriers on the attitude of managers to respond to sustainability requirements in daily practices. The adjusted  $R^2$  is (0.309), F value is 41.284 ( $p= 0.000$ ) and significant at the 1% of significance level, indicating that 30.9% of total variance of managers' attitude towards implementing sustainability is explained by challenges and barriers encounter hostels. This result assures the importance of overcoming challenges and barriers to help management moving towards SD features. This result supported (H5): Challenges and barriers and difficulties encounter hostels have a negative impact on the attitude and ability of management to respond to sustainability requirements in daily practices.

**Table (12): The Impact of challenges and barriers on sustainability of practices**

<b>R</b>	<b>R-Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		
.562 <sup>(a)</sup>	.316	.309	.721		
<b>ANOVA<sup>(b)</sup></b>					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	24.732	1	24.732	47.533	0.000 <sup>(b)</sup>
<b>Residual</b>	53.593	103	0.520		
<b>Total</b>	78.325	104			
<b>Coefficients<sup>(a)</sup></b>					
	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
<b>(Constant)</b>	5.477	.380	-.562-	14.399	.000
<b>Challenges and barriers</b>	-.648-	.094		-6.894-	.000

Dependent Variable: Sustainability of practices

#### 4.5 Proposed framework for sustainability in hostels

The last objective of this study was to provide a conceptual framework that can be used effectively in supporting hostel sustainability based on some factors that improve sustainability in practices of hostels. This study empirically tested the main factors by adopting the research design and methodology.

Linear regression analysis was used as inferential statistical techniques to investigate its significance impact of organizational factors on sustainability of practices. The factors in the conceptual framework are ranked according to the impact level (adjusted  $R^2$ ) they have on sustainability of practices.

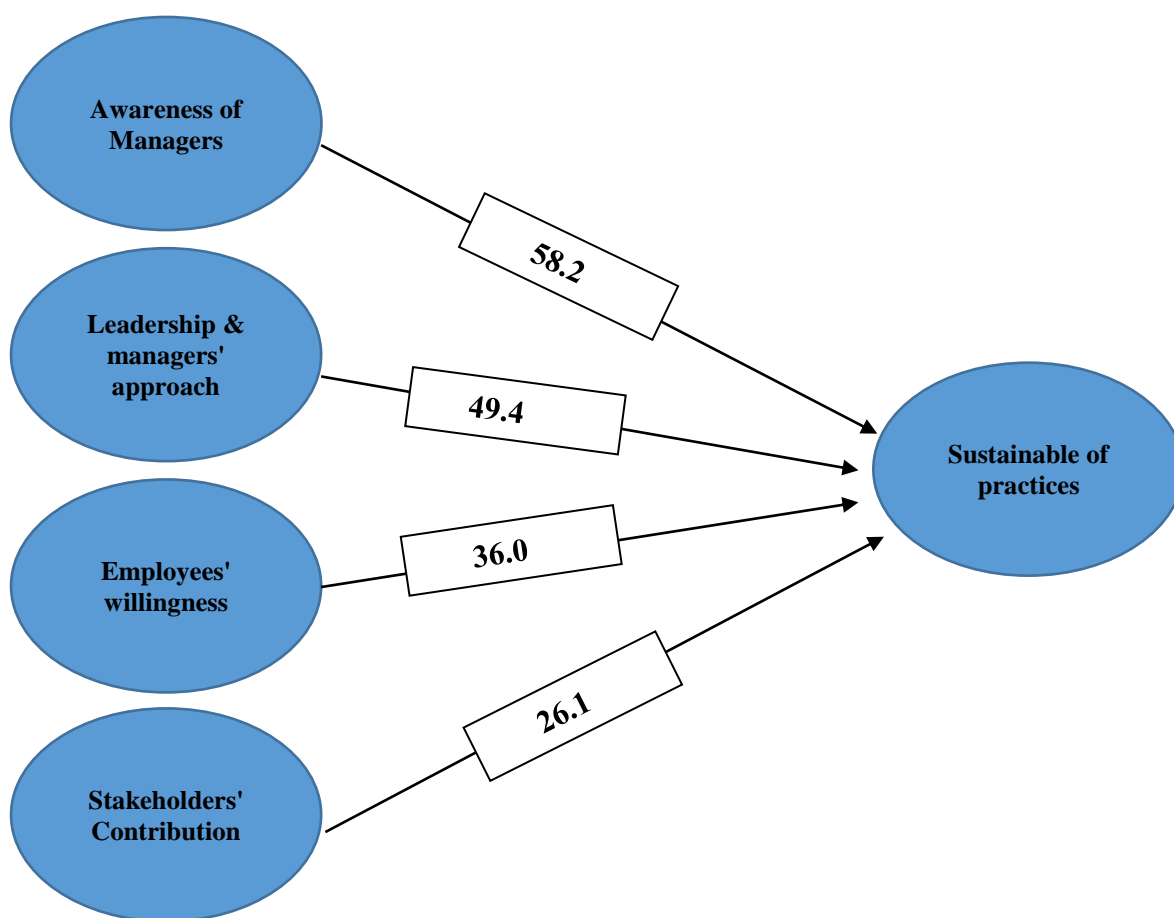


Figure (2): The proposed framework for sustainability

Figure (2) shows the proposed framework based on the linear regression analysis to investigate the impact of independent variables (the main factors) on dependent variable (sustainability of practices): where awareness of management (adjusted  $R^2= 58.2$ ), leadership and management attitude (adjusted  $R^2= 49.4$ ), participation willingness of employees (adjusted  $R^2= 36$ ), and stakeholders' contribution (adjusted  $R^2= 26.1$ ). The proposed conceptual framework is an important contribution of this study to hostels that would like to incorporate sustainability on their practices.

The first step in this framework will be set to begin with awareness by formal and informal means such as training on sustainability requirements. Managers must be trained to acquire knowledge from natural sciences, humanities and social sciences to understand the principles and requirements of SD. Knowledge and awareness is necessary but insufficient condition for implementing sustainability strategy because the external factors that affect human behaviors. Leadership and management attitude of hostels' managers towards sustainability should be moved around creating sustainability culture in daily practices; when appropriate knowledge, awareness, and effective leadership have been acquired, managers can then change their vision and attitude in their behavior. Employees' participation willingness to sustainability should be enhanced by providing different incentives. The contribution of stakeholders shouldn't be ignored as they are accountable for helping hotels' management to achieve sustainability strategy.

#### **4.6 Limitations of the study and future research**

There are some limitations of the study. First, the results and conclusion of this study are based on a sample only from six hostels; therefore, the generalizability of the findings to all hostels in Egypt is limited. More studies are needed to cover other hostels which are not included in this study. The findings of the current study need further investigation to discover the factors that affect the behavior of students toward sustainability of hostels, and how to overcome challenges and obstacles that encounter the implementation of sustainability programs in hostels.

#### **5. Conclusion and Recommendations**

The community of universities must rethink and reconstruct their policies and daily practices in order to contribute to sustainable development at local and national levels. The Ministry of Higher Education should make sustainability the foundation for hostel practices, and strive to conserve natural resources and support sustainable use. The implementation of sustainability in daily practices has economic, social, and environmental consequences that go beyond the hostels. For a hostel to be sustainable, it must stimulate economic growth, improve society, and preserve the environment. The findings of this study should therefore be considered by the university management in their attempt to improve sustainable practices of their hostels. In order for achieving sustainability in hostels' practices, the following recommendations be suggested:

1. University management should formulate effective culturally program to encourage the engagement of stakeholders (suppliers, employees, and students) in hostel sustainable practices.
2. University management should organize an effective students and employees' workshop on waste reduction; energy efficiency and sensitization actions; and promotion of sustainable practices. These activities could help build the foundations of a sustainable hostels and society.

3. The Ministry of Higher Education should mandate university management to commit to sustainability by integrating sustainability into strategies of hostels and to establish an office for SD, with qualified employees. This office should conduct hostel sustainability assessments in collaboration with other stakeholders so as to establish the extent to which the hostel is moving towards sustainability in terms of economic (energy and resource consumptions), social (develop employees' skills), and environmental operational practices (waste management), and this will ascertain the existing strengths, weaknesses, opportunities, and threats (SWOT) in embedding sustainability in the hostel.
4. The university management should obligate hostels management to establish a set of standards, policy guidelines, and best practices required to become sustainable in economic, social, and environmental practices. A road map that would allow their hostels to become more sustainable and play a leading role in promoting SD in the country.
5. University management should select the manager/leader of the hostel who are aware of SD concept and have positive attitude towards the implementation of sustainability into hostel practices.

## **REFERENCES**

- Abramson, P. (2009). "Downsizing Residence Halls: Space and Costs. Living on Campus", College Housing Report, Vol. 12(5), pp. 20-27.
- Abramson, P. (2010). "Green and Growing: Sustainability and amenities are increasing in new residence hall projects", Living on Campus, College Housing Report, Vol. 13 No. 5.
- Abubakar, I. R.; Al-Shihri, F. S.; & Ahmed, S. M. (2016). "Students' Assessment of Campus Sustainability at the University of Dammam, Saudi Arabia", Sustainability, 8 (1), p. 59.
- Abugre, J. B. (2014). "Managerial role in organizational CSR empirical lessons from Ghana", Corporate Governance, Vol. 14(1), pp.104-119.
- Ajayi, M., Nwosu, A., & Ajani, Y. (2015). "Students' Satisfaction with Hostel Facilities in Federal University of Technology, Akure, Nigeria", European Scientific Journal, Vol. 11(34), pp. 402-415.
- Ajilian, H. (2014). "Review of Factors Affecting Sustainability in the Universities", Unpublished Master's Thesis, Technological University, Michigan.
- Al-Naqbi, A. K. & Alshannag, Q. (2018). "The status of education for sustainable development and sustainability knowledge, attitudes, and behaviors of UAE University students", International Journal of Sustainability in Higher Education, Vol. 19(3), pp. 566-588.

Al-Shihri, F. S. (2013). "Principles of Sustainable Development and Their Application in Urban Planning in Saudi Arabia", *Journal of Engineering Sciences*, Assiut University, Faculty of Engineering, Vol. 41(3), pp. 1-25.

Alshuwaikhat, H. M. & Abubakar, I. (2008). "An Integrated Approach to Achieving Campus Sustainability: Assessment of the Current Campus Environmental Management Practices", *Journal of Cleaner Production*, Vol. 16, pp. 1777–1785.

Aluko, O.E. (2011). "The Assessment of Housing Situation among Students in the University of Lagos". *An International Multi-Disciplinary Journal*, vol. 5(3), pp. 104 – 118.

Amole, D. (2005). "Coping strategies for living in student residential facilities in Nigeria", *Journal of Environment and Behavior*, Vol. 37(2), pp. 200-219.

Amole, D. (2009). "Residential satisfaction and levels of environment in students residences", *Journal of Environment and Behavior*, Vol. 41(6), pp. 1-14.

Barth, M. & Timm, J. M. (2010). "Higher Education for Sustainable Development: Students' Perspectives on an Innovative Approach to Educational Change", *Journal of Social Sciences*, Vol. 7(1), pp. 13–23.

Beringer, A. & Adomßent, M. (2008). "Sustainable University Research and Development: Inspecting Sustainability in Higher Education Research", *Environmental Education Research*, Vol. 14, pp. 607–623.

Chaplin, G. & Wyton, P. (2014). "Student Engagement with Sustainability: Understanding the Value–Action Gap", *International Journal of Sustainability in Higher Education*, Vol. 15(4), pp. 404–417.

Cole, L. & Wright, T. (2003). "Assessing Sustainability on Canadian University Campuses: Development of a Campus Sustainability Assessment Framework", Unpublished Master's Thesis, Royal Roads University, Victoria, BC, Canada.

Cortese, A. D. (2010). "Mobilizing Higher Education to Create a Healthy, Just and Sustainable Society", In *Proceedings of the Luther College Convocation*, Decorah, IA, USA.

Curley, P. (2003). "Residence halls: making campus a home", *American School & University*, Vol. 75(12), pp. 245-256.

Earl, C.; Lawrence, A.; Harris, N.; & Stiller, S. (2003). "The Campus Community and the Concept of Sustainability: An Assessment of College of Charleston Student Perceptions". *Chrestomathy*, Vol. 2, pp. 85–102.

Emanuel, R. & Adams, J. N. (2011). "College Students' Perceptions of Campus Sustainability", *International Journal of Sustainability in Higher Education*, Vol. 12(1), pp. 79–92.

Fernando, R. (2012). "Sustainable globalization and implications for strategic corporate and national sustainability", *Corporate Governance*, Vol. 12(4), pp.579-589.

Finlay, J. (2010). "Creating Campus Culture: A Critical Analysis of Residence Sustainability Initiatives at Queen's University", Queen's University Kingston, Ontario, Canada.

Giang, T. (2014). "Sustainable Development Plan in Hospitality", Lahti University of Applied Sciences, retrieved September 20, 2018, from: [https://www.theseus.fi/bitstream/handle/10024/.../Huong\\_Thi.pdf?...2](https://www.theseus.fi/bitstream/handle/10024/.../Huong_Thi.pdf?...2)

Hassanain, A. M. (2008). "On the Performance Evaluation of Sustainable Student Housing Facilities", *Journal of Facilities Management*, Vol. 6(3), pp.212-225.

Hitchcock, D. & Willard, M. (2009). "The Business Guide to Sustainability: Practical Strategies and Tools for Organizations", Earthscan, 2nd edition. UK.

Hitchcock, D., & Willard, M. (2009). "The Business Guide to Sustainability: Practical Strategies and Tools for Organizations", EarthScan, London, UK.

Kanyi, J. M. (2015). "A framework for improving employee commitment to a sustainability strategy", Unpublished Master Thesis, Nelson Mandela Metropolitan University, South African.

Khozaei, F., Ayub, N., Hassan, A.S. and Khozaei, Z. (2010), "The Factors Predicting Students' Satisfaction with University Hostels, Case Study, Universiti Sains Malaysia", *Asian Culture and History*, Vol. 2(2), pp. 148-158.

La Roche, C. A., Flanigan, M. A. & Copeland, P. K. (2010). "Student housing: trends, preferences and needs", *Journal of Contemporary Issues in Education Research*, Vol. 3(10).

Lozano, R. (2012). "Towards better embedding sustainability into companies' systems: an analysis of voluntary corporate initiatives", *Journal of Cleaner Production*, Vol. 25, pp.14-26.

Lozano, R.; Ceulemans, K.; Alonso-Almeida, M.; Huisingh, D.; Lozano, F.J.; Waas, T.; Lambrechts, W.; Lukman, R.; Hugé, J. (2015). "A Review of Commitment and Implementation of Sustainable Development in Higher Education: Results from a Worldwide Survey", *Journal of Cleaner Production*, Vol. 108(Part A), pp. 1-18.

Lynndsay, O. (2015). "A case for sustainable off campus student housing", The university of Arizona, pp. 1-25. Available at: <http://hdl.handle.net/10150/584157>

Martin, J. & Allen, M. (2009). "Students in my backyard: housing at the campus edge and other emerging trends in residential development", *Planning for Higher Education*, Vol. 37(2), pp. 34-43.

Meir, I., Motzafi-Haller, W., Kruger, E., Morhayim, L., Fundaminsky, S. & Oshry-Frenkel, L. (2007). "Towards a comprehensive methodology for post occupancy evaluation (POE): a hot dry climate study", 2nd PALENC Conference and 28th AIVC Conference on Building Low Energy Cooling and Advanced Ventilation Technologies in the 21st Century, Crete Island, Greece, Vol. 2, 27-29 September, pp. 644-653.

Nikpour, M.; Pooladkhai, R. (2012). "Review of different architectural strategies for creating sustainable universities", *Arts and Design Studies*. Vol. 5, pp. 1–5.

Savanick, S.; Strong, R.; & Manning, C. (2008). "Explicitly Linking Pedagogy and Facilities to Campus Sustainability: Lessons from Carleton College and the University of Minnesota", *Environmental Education Research*, Vol. 14, pp. 667–679.

Sawyer, P. T. & Yusof, N. A. (2013). "Student satisfaction with hostel facilities in Nigerian polytechnics", *Journal of Facilities Management*, Vol. 11(4), pp. 306-322.

Silvius, A. J. G. & Schipper, R. (2010). "A Maturity Model for Integrating Sustainability in Projects and Project Management", paper presented at the IPMA World Congress, 1-3 November 2010, Istanbul.

Suki, N. M. & Chowdhury, I. A. (2015). "Students' Attitude and Satisfaction Living in Sustainable On-Campus Hostels. Malaysian" *Journal of Business and Economics*, Vol.2, No.1, 2015, pp. 35-47.

Tavakol, M. & Dennick, R. (2011). "Making sense of Cronbach's alpha", *International Journal of Medical Education*, Vol. 2, pp. 53-55.

Uehara, T. & Ynacay-Nye, A. (2018). "How Water Bottle Refill Stations Contribute to Campus Sustainability: A Case Study in Japan", *Sustainability*, Vol. 10 (9), p. 3074.

Wiens, J. (2010). "Furniture evolution", *College Planning and Management*, Vol. 13 (3).

Willoughby, B. J., Carroll, J. S., Marshall, W .J. & Clark, C. (2009). "The decline of in loco parentis and the shift to coed housing on college campuses", *Journal of Adolescent Research*, Vol. 24 (1), pp. 21-36.

Yuan, X. & Zuo, J. A. (2013). "Critical Assessment of the Higher Education for Sustainable Development from Students' Perspectives: A Chinese study", *Journal of Cleaner Production*, Vol. 48, pp. 108–115.

Zeegers, Y. & Francis Clark, I. (2014). "Students' Perceptions of Education for Sustainable Development", *International Journal of Sustainability in Higher Education*, Vol. 15(2), pp. 242–253.

## تقييم ممارسات المدن الجامعية نحو الاستجابة لمتطلبات التنمية المستدامة

تامر عامر<sup>١</sup>

<sup>١</sup> كلية السياحة والفنادق-جامعة مدينة السادات

### المخلص

هدفت الدراسة إلى تقييم دور المدن الجامعية في الاستجابة لمتطلبات التنمية المستدامة من خلال التعرف على درجة توجه إدارة المدن الجامعية نحو التنمية المستدامة، وقياس وعي إدارة المدن الجامعية بمفهوم التنمية المستدامة، واستكشاف دور أصحاب المصالح (الموظفون، والموردون، والسلطات الحكومية) نحو التنمية المستدامة، وتحديد مدى قيام المدن الجامعية بتطبيق الأبعاد الاقتصادية، والاجتماعية، والبيئية في ممارساتها التشغيلية، وأخيراً تم صياغة التحديات والعقبات التي تواجه المدن الجامعية في سبيل تحقيقها لمتطلبات الاستدامة. اعتمدت الدراسة على المنهج الوصفي التحليلي، حيث تم تصميم استبانة تحتوي علي ٥٣ سؤال للتحقق من فروض البحث، وتم توزيعها على ١٨٠ موظفاً في ست من المدن الجامعية (جامعة مدينة السادات، جامعة المنوفية، جامعة طنطا، جامعة المنصورة، جامعة كفر الشيخ، فرع جامعة الأزهر بالأسكندرية). وكان عدد الاستبانات المستردة والصالحة ١٠٥ استبانة (٥٣,٣٣%). وأظهرت النتائج أن إدارة المدن الجامعية ليس لديها الوعي الكافي عن مفهوم الاستدامة، ولا تمتلك نظرة واضحة عن ما تمثله التنمية المستدامة، ومتطلبات تطبيق أبعادها في الممارسات التشغيلية، إضافة إلى أن السلطات الحكومية لا تقوم بدور واضح من خلال التشريعات والقوانين في حث وتوجيه المدن الجامعية نحو تبني تطبيق متطلبات الاستدامة في ممارساتها التشغيلية، ولهذا فهي لا تمتلك استراتيجيات ممنهجة ورؤية بعيدة المدى حول هذا الموضوع، وقد تعود هذه السلوكيات حسب ما توصلت إليه الدراسة إلى مجموعة من الصعوبات والعقبات التي تواجه إدارة المدن الجامعية متمثلة بالأساس في الصعوبات المالية، والصعوبات المعرفية والتقنية، وأظهرت عينة الدراسة اهتماماً واستجابة إلى حد ما بمتطلبات الأداء الاقتصادي للتنمية المستدامة في الممارسات التشغيلية علي عكس القصور الشديد الواضح فيما يخص ممارسات الأداء الاجتماعي والأداء البيئي. وأخيراً تم التوصل إلى إطار مقترح وتقديم مجموعة من التوصيات للنهوض بمتطلبات التنمية المستدامة في الممارسات التشغيلية للمدن الجامعية.

**الكلمات الدالة:** التنمية المستدامة، الإستدامة، المدن الجامعية.