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The Concept of Sustainable Residential College: A Study on the Provision of Facilities in the Public University Residential Colleges in Malaysia

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Abstract

This study was conducted to assist the development of a sustainable residential college in the future. Sustainable residential college is able to provide comfortable, conducive and complete amenities and facilities. The purpose of this study is to identify the level of comfort of the accommodation and the level of facilities in the Malaysian public university residential college. The methodology used was through a questionnaire on 2874 respondents at seven public university residential colleges. The questionnaire consists of three parts, namely part A related to demographics, part B relating to comfort in the accommodation and part C related to the provision of support facilities. Descriptive and inferential data analysis is used for quantitative data using the Statistical Package for the Social Sciences software. The results showed that the comfort of the respondents on the provision of accommodation was at a comfortable level. The correlation test showed that there was a weak positive correlation between the years of occupation and the duration of residential college with the comfort of the room. For the provision of support facilities, the facilities provided are still incomplete and do not meet the academic requirements or for the self-development of the residents. Overall, this study has contributed to discussions regarding the provision of facilities at sustainable residential colleges in turn leading to improved living quality of residents.

Keywords: Sustainable, Residential Colleges, Facilities and Comfort

Introduction

The university's residential college is a space or physical building for students to live in. Its function is important as the residential area of the university with a high intellectual level that uniform with academic-based activities. Darus (2006), residential colleges are part of a major component of the higher education institute providing accommodation and food as well as conducting student development activities to university students. This statement clearly

demonstrates the importance of the residential college that needs to have comfortable facilities and equipment for the purpose of self-development in academic and self-personality development of the residents. The residential college is the residential area that created to ensure students can live near the university. According to Shafii et al. (2013), through a statement by the Ministry of Education Malaysia (KPM 1980) the purpose of the residential college that established by KPM was to place students who living far from the school, especially those from rural areas. Residential colleges play an important role in providing comfortable and conducive accommodation facilities to the residents. The provision of support facilities at residential colleges can help residents to stay more comfortable thus improving their quality of life. In a study by Anuar et al (2006), there are several goals for holding residential colleges:

- a. Providing a fun and beneficial experience to catalyse the academic success.
- b. Giving "privacy" rights to students, personal safety and personal property while in the university.
- c. Creating an appropriate environment for personal needs to achieve good self-performance.

To develop a sustainable residential college that meets the needs of the occupants. The facilities available at the residential college nowadays should be scrutinized and then will identify the issues and problems that may arise in the future could be overcome. According to Nordin (1994), the residential college is a perfect place to shape the development of students towards achieving educational goals. Overall, this study aims to identify the level of comfort and the provision of residential college facilities. The results obtained from the information are used to develop a guideline to develop a sustainable residential college.

The Issue of University Residential College Facilities

Nowadays, there are some issues that are becoming the problems for residential colleges which is happening. In a study at Universiti Sains Malaysia (USM) residential college by Sari (2003), the issue highlighted was related to student discomfort in accommodation. This issue is not a new issue but has even taken place much longer. This is evidenced by Noor (1984), stating that the facilities provided have not yet reached a satisfactory level and need to be considered. In fact, this issue was supported in the report of the Ministry of Higher Education of Malaysia, (2012) and Buyung & Shafii (2017), regarding issues and problems on the facilitation development of student facilities at residential colleges:

- a. Physical space aspects of the student: does not meet the standards of the Economic Planning Unit
- b. Aspect of basic room facilities: quantity of facilities and deteriorating quality
- c. Support facilitation aspect: the support facility provided could not help the student development aspect
- d. Facilities for disabled students: do not meet national and international standards
- e. Administrative facilitation aspect: the need for a facilities complex , a standardized administrative space

In another study by Shafii et al. (2013), finds some of the problems faced in the residential college which are, the facilities provided are not sufficient to meet the needs and facilities provided was outdated, and have been damaged. A study involving residential colleges of three

research clusters public university by Najib et al. (2012), shows the occupants of the residential colleges are not satisfied with the support facilities provided.

The final impact of the problem on this is the adverse impact on the sustainability of residential colleges. In Abas (2014), sustainability has three dimensions: environmental dimensions, economic dimensions and social dimensions. The disruption to one of these dimensions will have a negative impact on human beings, thus leading to a deterioration in the quality of life. For example, in the context of environmental dimensions in residential colleges, if not properly considered will cause problems such as floods, extreme heat, landslides and disease threats. According to Abdul Rahman & Hashim, (2012), natural disasters such as floods, fires and landslides are also cause of discomfort. Likewise with other dimensions such as economics that can lead to the problem of electricity wastage and water resources. In the social dimension, the problem of getting a calm and peaceful atmosphere will be disturbed. In the American Federation of Teacher Selamat et al. (2004), students that attending schools near the railway track, showed that students' achievement in reading was less satisfactory than those who were attending the quiet area.

Overall, the disruption to these three dimensions of sustainability will have a detrimental effect on the learning process of the inhabitants thus leads to deterioration of the quality of life. Yaacob & Yasak (2008), states that the quality of life of students while in the university is partly influenced by their place of residence. For Marzuki et al. (2017), the quality of life of the community is achieved when accessibility to a facility is within easy reach. Therefore, this study is needed to obtain the necessary information required to help develop a comfortable sustainable residential college and conducive in the future.

Literature Review

Residential College as Basic Student Needs

Maslow's Theory of Needs is important to examine the needs of people to live especially when engaging in the development of residential areas. A comfortable and conducive residential will encourage residents to stay long in that place and increase motivation to achieve other necessities. In the context of residential college as a comfortable student residential will increase the motivation of the occupants to achieve excellence throughout in the university. Yahaya & Ahmad (2010), individuals will be more convinced of themselves if positive and good responses and services are given to them. The same goes for the provision of conducive residential colleges. Occupants will have a higher motivation to achieve success if their residential is comfortable and conducive for learning, self-development and adequate rest. These basic necessities include the provision of canteens for nutritious and quality food, residential college conditions that are free from water, air and noise pollution that can interfere with the learning process and gain adequate rest / sleep. If these basic needs could not be fulfilled then residents will feel uncomfortable staying in the residential college thus causes them to provide their own needs or leave the residential college for not reaching their needs. The basic concept of Maslow's requirement according to Mok (2011), is;

- a. Intrinsic motivation is the inner forces residing in development of human physiological and psychological. Maslow believes this inner power encourages humans to pursue the excellent achievements that usually occur spontaneously without control or stimulus.

- b. When an individual has obtained satisfaction in a hierarchy, the needs for a higher hierarchy will happen naturally. If the lower hierarchy is still not been satisfied, needs for the higher hierarchy could not be developed.

In the context of developing a residential area such as the development of residential colleges, Maslow's Theory of Needs coincides with the physiological stage of the basic human needs level involving the residence. This stage is the first need that needs to be met perfectly before the other needs can be achieved. According to Adam (2015), physiological needs are the most basic needs that must be met by an individual. In this context, a comfortable residential college is a necessity for university students as a human being to continue their survival throughout the university. If the student's residence is uncomfortable and not conducive then it will disturb the entire life of the student and consequently can affect the learning process at the university. According to Abdullah & Hassim (2010), the construction of these residential colleges is intended to provide shelter to students and with the presence of residential colleges, accommodation problems can be solved especially for students who are far from home or abroad. Therefore, Maslow's Theory of Needs based on the basic needs namely the physiological needs by providing a comfortable and conducive residence is appropriate as the underlying theoretical study of the concept of sustainable residential college.

Facilities at Residential Colleges

According to Kassim (2012), as university that developing towards world-class universities, many factors need to be taken into consideration, among which are the aspects of facilities and services provided by the university to students as the customers. Alwee et al. (2008), states student's residential or dormitory facilities at institutions of higher learning such as universities is the place for students to sleep, relax, store the appliance and equipment and personal belongings comfortably and securely. According to Fadzil (2004), stressed that the hostel accommodation facilities at Malaysian institutions of higher learning should provide pleasant and comfortable infrastructure for students who will be the leaders of the country. Hassan (2000), in his study of the basic facilities available in the residential colleges, explains that the basic facilities have the same meaning with infrastructure as the whole basic amenities and services (such as transportation and communication facilities, electricity supply etc.) that necessary for development (growth) and infrastructure development. Problems such as low water pressure, crowding room occupant, lack of reading rooms, no internet facilities, etc. will certainly give emotional stress to students and prolonged emotional stress will certainly lead to serious health problems. In the study of Najib et al. (2011), has listed some of the major components of the facilities provided by the university residential colleges, namely:

- a. Bedroom: The most important component in the provision of facilities in the residential college. The bedrooms at the residential college are multifunctional type that combines the comfort of living space, academic learning and sleeping areas.
- b. Bathroom: Must be provided in each residential college for the purpose of personal hygiene.
- c. Laundry centre: This facility should be provided with the appropriate size to accommodate the number of occupants.

- d. Pantry: It is a kitchen with dining area. A good residential college should provide the pantry to create an atmosphere or environment like being at home. Even some researchers have stated that the provision of pantry facilities is necessary.
- e. Study rooms: Each residential college needs to provide the study room.
- f. Computer room: Provision of computer room will allow residents to get internet access for learning purposes.
- g. TV room: The provision of TV room is to meet the social, recreational and entertainment needs of the occupants.
- h. Meeting room: The provision of meeting room as occupant space will carry out discussion activities.
- i. Lobby: Public areas that have formal and informal space to be comfortably accessible to residents and visitors. This area can also serve as a reading space.
- j. Musalla: For the use of Muslim residents and visitors.
- k. Support services: Its provision is for the purpose of facilitating the livelihood of residents such as the provision of mini markets, 24-hour stores, ATM machines, elevators, bookstores, security controls, fire equipment and so on.

Therefore, it is important for those that responsible to always be aware in providing the perfect facilities for students living in the residential colleges. As the residential area for students then all the same needs as in the public housing area should be provided. According to Azemi & Assain (2010), theoretically, the level of satisfaction of students towards the facilities and services provided by the institutions can be fulfilled when the needs and requirements are met accordingly. Tahir et al. (2009) what is more important is that students living in residential colleges are satisfied and can enjoy a comfortable learning environment as well satisfied with the management of residential colleges. The residential college is not only the place to stay but also as the centre of information sharing between students from diverse backgrounds, academics, courses, years, nations and countries. These activities make residential colleges as the centrepiece of life in the university because residential college is the centre where students gather, socialize and communicate with various levels of campus society.

Method

Population and Survey Sample

Referring to Table 1 the total population in this study as a whole is 13760 full-time university students from seven public university residential colleges. The total number of samples suggested in the Krejcie and Morgan tables (1970) was total of 2199 respondents while the actual number of samples taken from the field was 2874 respondents. Universiti Teknikal Malaysia Melaka (UTEM) has the highest number of respondents with total of 676 respondents. The lowest number of respondents was from Universiti Pendidikan Sultan Idris (UPSI) with 241 respondents. The number of samples taken at each university residential college is not uniform according to the populations of the public university residences.

Table 1: Number of samples by University

University	Number of Residents	Sample	Sample Fields	Percentage (%)
Universiti Teknologi Mara (UITM)	3500	346	301	87
Universiti Putra Malaysia (UPM)	2260	331	386	116
Universiti Kebangsaan Malaysia (UKM)	1000	278	307	110
Universiti Pendidikan Sultan Idris (UPSI)	1000	278	241	87
Universiti Sains Malaysia (USM)	2000	322	329	102
Universiti Teknikal Malaysia Melaka (UTEM)	2000	322	676	210
Universiti Tun Hussein Onn Malaysia (UTHM)	2000	322	634	196
Total	13760	2199	2874	130

Research Instrument

This study used a questionnaire which has two parts, Part A includes items for student demographic, Part B related with occupant comfort in accommodation space design and part C relating to design and facilities in the residential college environment.

Part A: Respondent's background: The first parts of the questionnaire are the respondents were initiated with relevant demographic information. This section uses the closed question form and generally without involving profound personal information. There are four items in this section.

Part B: This part is a study on the comfort of the occupants about room occupants in the residential colleges. There are 12 items in this section. Items in this section form statement and the respondent must select an answer to scale renovation Likert 5 points according to the perception of each of the rooms were occupied, which is very uncomfortable (VUC), uncomfortable (UC), moderate comfort (SC), comfortable (C) and very comfortable (VC).

Part C: This section is a part that focuses on the provision of residential colleges and facilities. There are six sections of the theme in this section namely the design of residential college buildings (5 items), the provision of basic facilities in residential college building (15 items), provision of access facilities, accessibility and circulation (7 items), provision of green area and landscaping facilities (8 items), provision of sports and recreational areas (3 items) and provision of support facilities for resident activities (19 questions). The items in this section are in the form of a statement and the respondent should choose the answer to scale "Yes" or "No". Answer "Yes" indicates availability of facilities such as statement in the item or facility is available for use while for the answer does not indicate no available facilities. In this section according to Buyung (2017), the provision of less than 95% is considered incomplete.

Results and Discussion

Respondent Background

Referring to Table 2 shows the percentage of female respondents was the largest which is 68% (1967 respondents than male respondents). While the age of the respondents on survey

indicated that respondents aged between 20 years to 22 years was the largest percentage which 50.4% (1450 respondents). Duration students live in residential colleges showed less than a year is the largest percentage in this study which 53.2% (1529 respondents). Year 1 is the largest group in this study of 60.1% (1729 respondents).

Table 2: Respondents Background

Item		Total (%)
Gender	Male	907 (32)
	Female	1967 (68)
Age	Less than 20	1128 (39.2)
	20-22	1450 (50.4)
	23-25	257 (9)
	26-28	29 (1)
	29 above	10 (0.3)
Duration Stay in Hostels	Less than 1 year	1529 (53.2)
	1-2 Years	933 (32.4)
	3-4 Years	348 (12.1)
	5-6Years	54 (1.9)
	7 Years and above	10 (0.3)
Years of study	Year 1	1729 (60.1)
	Year 2	633 (22)
	Year 3	329 (11.4)
	Year 4	143 (5)
	Year 5	40 (1.4)

Residential Colleges' Rooms Comfort

Table 3 shows that overall 12 items of facilities in the comfort section of the in-rooms facilities have the highest number on a comfortable scale. Environmental items shows the highest numbers in comfortable scale with overall of 1589 respondents (54.6%), followed by study table items with 1368 respondents (47.6%) and room chairs items with 1365 respondents (47.5%). These results indicate that the occupants of the universities' residential colleges nowadays felt comfortable with the provision of in-room facilities.

Providing comfortable rooms with complete equipment will help the residents in terms of studying and getting enough rest. According to Abdullah (2011), the bedroom act as a study place should be conducive to strengthen student motivation in reviewing and reading books. Knirk (1979) believes that student cannot easily understand or process the information if the physical environments were uncomfortable. Therefore, it is a priority for the university to provide a residential college with accommodation space that can not only be used to rest and get enough sleep but also to encourage the occupants to achieve good academic achievement.

Table 3 Number of Respondents by Comfort of Facilities and Fittings at the Malaysia Public University Residential Colleges

Items	Comfort Scale				
	VUC	UC	SC	C	VC
	Number of respondents (%)				
Room environment	33 (1.1)	88 (3.1)	489 (17.0)	1569 (54.6)	695 (24.2)
Room size	38 (1.3)	130 (4.5)	632 (22.0)	1351 (47.0)	723 (25.2)
Hall	71 (2.5)	224 (7.8)	912 (31.7)	1176 (40.9)	491 (17.1)
Room ventilation	78 (2.7)	220 (7.7)	715 (24.9)	1262 (43.9)	599 (20.8)
Room lighting	57 (2)	182 (6.3)	659 (22.9)	1271 (44.2)	705 (24.5)
Room design	54 (1.9)	156 (5.4)	736 (25.6)	1327 (46.2)	601 (20.9)
Bed set	79 (2.7)	235 (8.2)	898 (31.2)	1121 (39)	541 (18.8)
Chairs	54 (1.9)	121 (4.2)	658 (22.9)	1365 (47.5)	676 (23.5)
Study table	48 (1.7)	117 (4.1)	573 (19.9)	1368 (47.6)	768 (26.7)
Wardrobe	65 (2.3)	172 (6)	615 (21.4)	1291 (44.9)	731 (25.4)
Toilet	164 (5.7)	361 (12.6)	842 (29.3)	1046 (36.4)	461 (16)
Shoes rack	193 (6.7)	220 (7.7)	701 (24.4)	1158 (40.3)	602 (20.9)

Relationship between Year of Study and Duration of Stay in Residential Colleges on the Preparation of In-room Facility

Correlation analysis is carried out on the data obtained to determine the presence of the relationship between the year of study and the duration of stay residential college with the comfort of the room facilities. Only available living room facilities, bed set and toilet only have significant value. The Spearman Correlation Test is used to determine the relationship between the items.

Table 4 shows that there is a correlation between the year of study and the comfort of the living room, the beds and toilets with their coefficient value ($r = 0.084$, $p = 0.000$), ($r = 0.068$, $p = 0.000$) ($r = 0.064$, $p = 0.001$) at confidence level $p < 0.01$. Meanwhile, the occupied living item found that there was a correlation between the duration of stay residential college with the comfort of the living room, the beds and toilet facilities with their coefficients ($r = 0.100$, $p = 0.000$), ($r = 0.053$, $p = 0.004$) and ($r = 0.090$, $p = 0.000$) at confidence level $p < 0.01$.

Based on the findings showed a positive relationship but with very weak strength. Thus, it can be summarized as the year of the respondents' study and the duration of stay residential college increases, so the comfort level of the living room, the bed set and toilet facilities also increased slightly. This is because respondents are able to adapt to the environment of a residential college. In addition, it is noted that the years of study and duration of residential college do not significantly affect the comfort of respondents in residential colleges. Hence, Ho is accepted that there is a relationship between the years of respondents' study and the duration of the residential college with the comfort of the living room, the facilities of the bed set and the toilet

Table 4 Spearman Correlation Between Years of Study and Duration of Stay Residential College with Living Room, Bed and Toilet of University Colleges

Item	Hall		Bed set		Toilet	
	r	p	r	p	r	p
Year of study	.084**	.000	.068**	.000	.064**	.001
Duration Stay in Residential College	.100**	.000	.053**	.004	.090**	.000

Preparation of Facilities and Equipment of Residential College

Building Design of Residential College

Table 5 shows that there are five items for preparation of residential college building design. The highest number of respondents in the provision of residential colleges was shown in user-friendly building items with a total of 2359 respondents (82.1%). Where green building items was at the lowest level with 1846 respondents (64.2%).

The design of residential college influenced the occupants' life. A lot of problem could occurs if the building design does not fit with the function of space. According to Fadzil (2004), the design of the student residential college which is the place for student to stay should not only be comfortable, but also have innovative and creative designs that can generate their minds. Current residential college design need to be studied in order to ensure that the sustainable residential college guidelines developed are suitable to be used as reference in design purpose.

In this section, the findings show that all items for residential building design facilities do not reach 95% level and this indicates that every facility is not enjoyed by all occupants.

Table 5: The Number of Respondents According to Provision of the Residential College Building Design.

Item	Yes		No	
	Number of Respondents	(%)	Number of Respondents	(%)
User Friendly Building	2359	82.1	515	17.9
Building With Safety Features	2320	80.7	554	19.3
Green Building	1846	64.2	1028	35.8
Energy Saving Building	1910	66.5	964	33.5
Attractive Building Design	1906	66.3	968	33.7

Basic Facilities at Residential College Building

Table 6 shows 14 items for the provision of basic facilities in the residential college buildings. The administrative office item had the highest number of respondents which is 2726 respondents (94.9%). The second item that got the highest number of respondents was the facility of notice boards with 2666 respondents (92.8%). Iron room items are the lowest items that provided with the total of 867 respondents (30.2%). The pantry room item showed the second highest number of respondents in this part with the total of 1230 respondents (42.8%).

According to Azemi & Assain (2010), theoretically, the level of satisfaction of students towards the facilities and services provided by the institutions can be fulfilled when the needs

and requirements are met accordingly. While in Kassim (2012), as the developing university towards the world-class universities there are many factors to be consider, one of them is the aspect of facilities and services provided by the university to the students as customers. Therefore, to ensure that the criteria for guidelines of sustainable residential college basic facilities to be developed is complete and comfortable, then the assessment of the provision of basic facilities in the building of the residential colleges in the present should be reviewed.

In this section, the findings showed that only one item for basic facilities in the residential college building reaches the 95% level of preparation that is administrative office items while other facilities items did not reach that level. Thus, it can be summarized that in the basic facilities part of public university residential buildings did not providing the complete facilities. Incomplete basic facilities at residential colleges will give the bad effects on the occupants and consequently will leads to deterioration in quality of life.

Table 6: The Number of Respondents According to the Provision of Basic Facilities in Residential College Buildings

Item	Yes		No	
	Number of Respondents	(%)	Number of Respondents	(%)
Corridor	2625	91.3	249	8.7
Toilets	2654	92.3	220	7.7
Bathroom	2649	92.2	225	7.8
Laundry Room	2428	84.5	446	15.5
Clothesline Space	2482	86.4	392	13.6
Store	1590	55.3	1284	44.7
Iron Room	867	30.2	2007	69.8
Pantry room	1230	42.8	1644	57.2
TV Room	1403	48.8	1471	51.2
Lounge Room	1846	64.2	1028	35.8
Administration Office	2726	94.9	148	5.1
Study Room	2279	79.3	595	20.7
Notice Board	2666	92.8	208	7.2
Information Centre	2046	71.2	828	28.8

Provisions of Walkway and Circulation Facilities

Referring to table 7 there are 7 items for the provision of facilities in the walkway and circulation facilities of residential colleges. The pedestrian walkway item had the highest number of respondents with 2579 respondents (89.7%). The second item with the highest number of respondents was the entrance gate facility with 2572 respondents (89.5%). Items with the lowest number of respondents was adequate parking facilities with 1628 respondents (56.6%). The OKU facility item was the second item with the lowest number of respondents with 1864 respondents (64.8%).

In designing a sustainable residential college, the provision of walkway and circulation facilities is one of the feature that needs to be given attention. According to Buyung & Shafii (2014), in designing the circulation system within the park, the factors need to be consider are visitor safety and protect the public from noise and all pollution. While the study of Shamsuddin et al. (2007), good accessibility is necessary to ensure the access to all campus facilities are available to all students, a consideration of the pedestrian space is required, the standards and the width of the pedestrian walkway as well as the many other important aspects in designing a functional design is necessary. Therefore, consideration of the walkway and circulation facilities needs to be scrutinized to ensure that the sustainable residential college is accessible and convenient.

In this section, the findings showed that items for walkway and circulation facilities in the residential colleges did not reach 95% level of provision and this indicates that every facilities was not enjoyed by all residents. Thus, it is concluded that there are university residential college that still did not provide the complete walkway and circulation facilities. Issues and problems such as traffic congestion, parking problems and air pollution due to motor vehicles could be avoided by providing complete and well-functioning walkway and circulation facilities.

Table 7: Number of Respondents According to the Provision of Walkway and Circulation Facilities in the Residential Colleges

Item	Yes		No	
	Number of Respondents	(%)	Number of Respondents	(%)
Walkway	2579	89.7	295	10.3
Walkway (Covered)	2041	71	833	29
Exit and Entrance	2572	89.5	302	10.5
Oku facilities	1640	57.1	1234	42.9
Adequate Parking	1628	56.6	1246	43.4
Bicycle Parking	1864	64.8	1010	35.1
Visitor Parking	1901	66.1	973	33.9

Provision of Green Areas and Landscape

Referring to table 8 there are 8 items for the provision of green areas and landscaping in residential colleges. The landscape scenery item was the highest number of respondents with 2115 respondents (73.6%). The mini zoo item has the lowest number of respondents with a total of 601 respondents (20.9%). The second lowest item is water element item with 1189 respondents (41.4%).

Comfortable residential colleges are not only lies within the interior of the building but also involve the external environment. Landscape elements are an external environmental element that provides a variety of positive effects on the residential college environment. Hanafiah (2008), stated to create a healthy, comfortable and attractive environment of life, the provision of parks and recreation areas is important and should be taken seriously. Alwee et al. (2008), residential colleges are facilities provided by the university for students' accommodation.

The basis of the quality of life is the home that can provide comfort to its residents. Landscape provision is one of the characteristics of the residential college that provides comfort. Landscape planning that is appropriate with the development site will ensure the balance between human development and environmental preservation thus creating a healthy and prosperous environment.

In this section, the findings showed that items for green area and landscaping facilities in the residential colleges did not reach 95% level and this indicates that every facility was not enjoyed by all residents. Thus, it can be concluded that there are some incomplete provision of green areas and landscaping in the residential colleges. The adverse effects as a result of lack in the provision of green areas and landscapes in the residential college will cause the occupants to lack of recreation areas while adverse effects on the environment such as overheating, floods, landslides and so forth.

Table 8: The Number of Respondents According to the Provision of Green Areas and Landscaping of Residential College

Item	Yes		No	
	Number of Respondents	(%)	Number of Respondents	(%)
Landscape Scenery	2115	73.6	759	26.4
Landscape Beauty	1887	65.7	987	34.3
Garden Chair	1919	66.7	955	33.2
Garden Table	1773	61.7	1101	38.3
Water Element (Lake / Pond / Fountain)	1189	41.4	1685	58.6
Waqf / Gazebo / Cottage	2005	69.8	869	30.2
Jogging Track	1860	64.7	1014	35.3
Mini Zoo	601	20.9	2273	79.1

The Provision of Leisure and Recreational Areas

Table 9 shows the results of data analysis for 3 items of facilities in terms of the provision of leisure and recreation areas in residential colleges. The field facilities have the highest number of respondents with 2393 respondents (83.2%). Leisure equipment items have the lowest number of respondents with a total of 2049 respondents (71.3%).

According to Md Dali & Awang (2006) Recreational activities, whether passive or active are human nature because an individual needs to rest, fill their free time with certain activities. In fact it is supported by Buyung & Shafii (2016), that the recreation is the activities in which individuals are free from their assigned work, family and society for peace of mind, satisfaction and self-development. Leisure area should be provided in each of the development project especially involving the residential areas such as residential colleges and this area must meet the needs of its residents so that they can utilize this facility properly and safely.

In this section, the findings showed that items for leisure and recreation facilities in residential colleges did not reach 95% level and this indicates that every facilities was not enjoyed

by all residents. Thus, there is still have incomplete residential college in terms of preparation for the leisure and recreation area of the residential college.

Table 9: The Number of Respondents According to the Provision of Leisure and Recreation Areas

Item	Yes		No	
	Number of Respondents	(%)	Number of Respondents	(%)
Field	2393	83.2	481	16.7
Leisure Equipment	2049	71.3	825	28.7
Sports Diversity	2114	73.6	760	26.4

Provision of Support Facilities for Students' Activity

Table 10 shows 19 items for the provision of support facilities for students' activity in residential colleges. Items that have the highest number of respondents on this scale were surau facilities items with a total of 2721 respondents (94.7%). The second highest item was the canteen / dining hall facility with 2669 respondents (92.9%). Elevator facilities item was the item that have the lowest number of respondents with a total of 1102 respondents (38.3%). The second item with the lowest number of respondents was gymnasium with a total of 1375 respondents (47.8%).

The facilities available at residential colleges help students in their learning. The residential college that provides a good internet access, library, canteen, TV room or silent room and so on, will give a pleasure for students to do the revisions apart from getting enough rest. According to Mohd Tahir et al. (2011), previous studies have shown that the facilities at the residential colleges can help to improve the academic performance was true and studies showed that comfortable colleges can enhance the students' academic in the residential colleges. Kachar (1989), which states that residential colleges should provide all facilities to improve the performance of the students. A good quality of life at the residential college not only provides comfort to the residents but also encourages the students to achieve excellence.

In this section, the findings showed that items for student support facilities at residential colleges that achieve the 95% of provision was only the surau facilities. This proves that there is still a residential college that does not provide the facilities as stated completely. The impact can affect the activities of the residents and thus will disturb the focus of learning. Through the guidelines of sustainable residential college facility, all facilities that support academic and student development activities will be developed completely in order for the future residential college developments are able to create more brilliant students from every aspect.

Table 10: Number of Respondents According to the Provision of Students' Activity Support Facilities for Residential College Students

Item	Yes		No	
	Number of Respondents	(%)	Number of Respondents	(%)
Security Post	2395	83.3	479	16.7
<i>Surau</i>	2721	94.7	153	5.3
Library	1692	58.9	1182	41.1
Cafeteria / Dining Hall	2669	92.9	205	7.1
ICT Room / Computer	1763	61.3	1111	38.7
Laundry Centre	2042	72	832	28.9
Business Centre	2296	79.9	578	20.1
Discussion Room	2049	71.3	825	28.7
Rest Room	1842	64.1	1032	35.9
Meeting Room	2127	74	747	26
Activity Room	2103	73.2	771	26.8
Internet Access	1913	66.6	961	33.4
Gymnasium	1375	47.8	1499	52.2
Elevator	1102	38.3	1772	61.7
Fire Extinguisher	2665	92.7	209	7.3
Cultural Hall/ Arts	1427	49.7	1447	50.3
Bus Stop	2637	91.8	237	8.2
ATM Facilities	1707	59.4	1167	40.6
Associations / Clubs	1900	66.1	974	33.9

Conclusion

The occupants' room is a multifunctional room that provides facilities to relax, sleep, do revision, complete the assignments and socialize. Therefore, the comfort aspect of the occupants is important and needs to be given attention when developing the residential college. In the context of this study, the comfort of occupants on the provision of facilities in the room was at a comfortable level but still needs to be improved to be able to increase the comfort of the occupants. For the correlation test, there was a weak positive correlation between the years of occupation and the duration of the residential college with the comfort of the room facilities.

For the provision of environment facilities in residential college, provision of facilities that assist residents in terms of academic and personal development are found to be developed in a non-uniform manner. This shows that there are facilities that did not developed by the residential college although there is the need for the facilities to every occupant for academic and personal development. Without complete support facilities, the life of the occupants will not be going smoothly. In order to create the residential colleges as the second learning centre that capable in producing the holistic students, it is a necessity to provide the complete and perfect support

facilities in order to support and assist residents to excel in academic and self-development.

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