

# The level of satisfaction on the daylighting education essay

[Education](#)



## **Introduction:**

This chapter is an elaboration of the process used to carry out this research. In fact methodology makes the right platform in order to enable the researcher to map out the research work in relevance to make solid plans. It includes: the background of the study area, the research method which includes the data collection method, and the data analysis method.

## **background of study area:**

The architecture schools chosen in this research are all located in the state of Selangor. In fact Selangor's history started on the 16th century when the area natural wealth was discovered which in return attracted miners, immigrants and colonizers. The Bugis, Malay people for Makassar now known as Ujung Padang were the main emigrant followed by the invasion the Portuguese traders then Dutch. The state was nominated both politically and economically in 1700 where the Sultanate of Selangor was established. During the eighteenth century, the state expended its influence and became a regional political power. As the western colonial increased leading to fighting between Bugis, Malay and Chinese, the state was invaded by British who included Selangor in the federal Malay state then 1948 the state joined the federation of Malaya which became in 1957 an independent state in the Commonwealth of Nations (interKnowledge Corporation 2006). Today Selangor also known as Darul Ehsan or " Abode of sincerity" is the most developed and richest state of Malaysia with a gross domestic product (GDP) of RM 128. 815 billion (RM 42 billion) in 2010 which represent 23% of the total Malaysian's GDP. The state is also the most populated with a high

standard of living. Selangor is located in the west coast of Peninsular Malaysia bordered to the east by Pahang, to the west by Strait of Malacca, to the north by Perak and to the south by Negeri Sembilan. The state's capital is Shah Alam which is the first city of Selangor and the royal capital is Klang. The rapid growth in the state is due to the modernization in the Klang Valley (Wikipedia 2013). <http://www.malaysia-maps.com/images/map-selangor.gif> Fig 1: showing location of Selangor's map, source: <http://www.malaysia-maps.com/selangor.htm>, derived on 8/11/2013. The locations of the study areas within Selangor are as following:

### **Limkokwing university:**

Limkokwing University is an international University represented in 3 continents. With its 12 campuses in Botswana, Cambodia, China, Indonesia, Lesotho, Malaysia, Swaziland and United Kingdom, the school home about 30 000 students coming from more than 150 countries. Through its innovative brand of creative education, Limkokwing has achieved worldwide recognition (Limkokwing university of creative technology 2013). [http://www.jobstreet.com.my/jobs/2013/2/1/10/\\_pics/lim\\_01.jpg](http://www.jobstreet.com.my/jobs/2013/2/1/10/_pics/lim_01.jpg) Fig 2: showing the University of Limkokwing, source: <http://www.jobstreet.com.my/jobs/2013/2/1/10/1864420.htm?fr=R>, derived on 08/04/2013

The school is located in Jalan Teknokrat within cyberjaya at 391 meters form telekom, 1. 2 kilometer form putrajaya terminal and 1. 3 kilometer form NTT data cyberjaya (Mark twain 2012). In fact Cyberjaya also known as the model intelligent city of the world is the center of Malaysia's vision for the new economy and world-class multimedia and information technology (IT) bordered on the north by Kuala Lumpur City Centre (KLCC) and on the south <https://assignbuster.com/the-level-of-satisfaction-on-the-daylighting-education-essay/>

by the multimedia super corridor (Lim Kit Siang 2013). [http://4. bp. blogspot. com/\\_X2I3mma0RVc/TND64ZbQsSI/AAAAAAAAA0/zFgLjkI2NCY/s1600/map. jpg](http://4.bp.blogspot.com/_X2I3mma0RVc/TND64ZbQsSI/AAAAAAAAA0/zFgLjkI2NCY/s1600/map.jpg)

Fig 3: Cyberjaya map showing the location of limkokwing university, source: [http://masiswammu. blogspot. com/p/location. html](http://masiswammu.blogspot.com/p/location.html), derived on 08/04/2013.

## **Taylor's University**

Taylor's University is a private university located in Subang Jaya. The university is member of the Taylor's education group which includes Taylor's college, nexus international school college, garden international school, Australian international school Malaysia, Sri garden school, garden international school, Putrajaya and nexus international school (Singapore). Founded in 1969 the university is one of the oldest and most successful private institutions which overs various range of course at all level (Taylor's university 2013). [http://postgraduate. my/wp-content/uploads/2012/06/Taylor-University-College-300x208. jpg](http://postgraduate. my/wp-content/uploads/2012/06/Taylor-University-College-300x208.jpg)

Fig 4: showing taylor's university, source: <http://postgraduate. my/institution/taylors-university/>, derived on 08/04/2013. Taylor's is located in jalan Taylors within 30 mn away for Kuala Lumpur and 15 mn away from Sunway. The campus area is about 27 acres surrounded by a man-made lake as well as a landscape of water plants, flowering shrubs and trees (foursquare 2013). [http://www. taylors. edu](http://www.taylors.edu).

Fig 5: showing the location of Taylor's university, source: [http://usapps2010. wordpress. com/2010/07/23/location-of-taylors-university-college-lakeside-campus/](http://usapps2010.wordpress.com/2010/07/23/location-of-taylors-university-college-lakeside-campus/), derived on 08/04/2013

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## **Research method:**

The method used in order to achieve the objectives set for this research is a descriptive research on a quantitative method where the description is verified by formulated hypotheses. The literature review done in order to identify the elements of school design environment that can impact learning and teaching shows that there is a strong relationship between school design environment and education. It also shows that sustainable features and technologies used in a school environment can considerably increase the level of satisfaction of students and teachers on their school environment. In order to verify the above hypotheses the following will be done: Since sustainability is a new trend, two architecture schools that have been recently constructed have been chosen as case studies. The following hypothesis will be analyze : " the higher the level of sustainability applied in architecture school environment, the higher the level of satisfaction of students and teachers on their school environment" Questionnaires will be given to 20 students and five teachers in each school. This is done in order to identify their level of satisfaction and the level of sustainability applied in their schools Then finally a comparison of the two variables will be done in order to conclude on whether or not there is a relationship between the two variables.

## **Data analysis method**

The analysis of the data will be done with the use of the Statistical Package for the Social Sciences (SPSS 16. 0) software. A chi-square test will be done between the two variables in order to identify whether or not there is a relationship between them. This analysis will also help to identify the

elements of school design and sustainable features that are mostly taken into consideration in the design of the two chosen schools based on students and teachers response.

## **Chap IV: data analysis**

### **Introduction**

This chapter is an analysis of the data collected in Limkokwing University and Taylor's University done in order to evaluate how fare the application of sustainability in a school environment can affect its occupants. This is done with the use of the Statistical Package for the Social Sciences (SPSS 16. 0) software. An analysis of the level of " sustainability applied" in school environment and the " level of satisfaction" of the school building users on their school environment will first be done for each school in order to conclude whether there is a relationship between the two factors. Then a general analysis will be done in order to identify what are the most satisfactory feature and sustainable features applied in Malaysian's architecture schools. Then finally a conclusion and recommendation will be done on the application of sustainable feature in school environment.

**Case studies****Limkokwing University****2. 1. 1 Participants:****Users status****Frequency****Percent****Valid Percent****Cumulative Percent****Students**

2080. 080. 080. 0

**Teachers**

520. 020. 0100. 0

**Total**

25100. 0100. 0As shown in the table above there is a total of 25 respondents in Limkokwing University which includes 20 students and 5 teachers.

## **Analysis of the level of satisfaction of school building users on their school environment**

### **- Overall percentage**

Fig 1: shows the overall level of satisfaction of students and teachersThe table above shows the overall level of satisfaction of students and teachers on the design of Limkokwing University based on the six chosen factors of school design environment. After combining the results the analysis shows

that 18. 287 % are satisfied while 38. 86 % are dissatisfied with the design of their school environment.

## **- Comparison of factors:**

### **Thermal comfort:**

Fig 2: shows the level of satisfaction on the Natural ventilationThe above graph shows the level of satisfaction of school building users (students and teachers) on the efficiency of natural ventilation in their classes, studios, and offices. It shows that 20% of the respondents are satisfied, 40% are not satisfied and 40% are neither satisfied nor dissatisfied with the design of their school environment.

### **Lighting:**

Fig 3: shows the level of satisfaction on the daylightingThe chart below shows the level of satisfaction of both students and teachers on the efficiency of daylight in their studios, offices, and classrooms. After combining the results it was found 12 % of the respondents are satisfied while 56% are not satisfied and 32% are neither satisfied nor dissatisfied with the design of their school environment.

### **Green spaces:**

Fig 4: shows the level of satisfaction on the efficiency of green spacesThe bar chart below shows the level of satisfaction of both students and teachers on the efficiency of green spaces found in their school environment. 8% of the respondents rated their school environment to be good while 20% rated it to be poor; and 12% rated it to be very good while 48 % are neither satisfied nor dissatisfied with the design of their school environment.

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### **Building materials:**

Fig 5: level of satisfaction on school building materialsThe bar chart above shows the level of satisfaction of both students and teacher on the materials used for the design of their school. The combination of results shows that 22% are satisfied; 44% are not satisfied and 44% are neither satisfied nor dissatisfied on the materials used for the design of their school.

### **Spaces:**

Fig 6: shows the level of satisfaction on special organizationThe bar chart above shows the level of satisfaction of students and teachers on the organization of indoor and outdoor spaces in their school environment. The result shows that 16% of respondents consider their school environment to good; 8% consider it to be very good; 16% consider it to be poor while 48% are neither happy nor unhappy with the design of their school environment.

### **Classroom:**

Fig 7: level satisfaction on the design of classroomsThe above graph shows the level of satisfaction of school building users (students and teachers) on the design of their classrooms or studios. By combining the results it was found that 20% are satisfied while 36% are not satisfied and 44% are neither satisfied nor dissatisfied with the design of their classrooms/studios.

### **Aesthetic:**

Fig 8: shows the level of satisfaction on the overall school's designThe graph above shows the level of satisfaction of both students and teachers on the overall design of their school environment. The following results are found:

20% are satisfied 36% are not satisfied And 44% are neither satisfied nor dissatisfied

### **Conclusion:**

According to the above results it was found that students and teachers are mostly satisfied with organization of indoor and outdoor spaces and mostly dissatisfied with the materials used for the design of their building.

### **Users point of view by status:**

#### **Student point of view:**

Fig 9: students satisfaction in Taylor's university The bar chart above shows the level of satisfaction of students with the design of their school environment. After combining the results it was found that students are mostly not satisfied with the design of their school environment as shown in the following results: 21. 431% are satisfied 35% are not satisfied And 43. 57% are neither satisfied nor dissatisfied

#### **Teachers point of view:**

Fig 10: shows the level of satisfaction of teachers The graph above shows the level of satisfaction of teacher in the design of their school environment. The following results have been found: 5. 714% are satisfied 54. 29% are not satisfied And 40% are neither satisfied nor dissatisfied with the design of their school environment.

## **Conclusion:**

From the above results it can be concluded that both students and lecturers are not satisfied with the design of their school environment. The results show that teachers are less satisfied than students.

## **Analysis of the level of sustainability applied in limkokwing university:**

### **- Overall percentage:**

Fig 11: showing the level of sustainability applied in Taylor's university  
The above graph shows the level of sustainability applied in Limkokwing University. The majority of respondents which is about 44.8% are neither agree nor disagree while 23.2% disagree on the application of sustainability in their school environment.

### **- Comparison of factors:**

#### **Climate, Energy and Water:**

##### **– Renewable energy:**

Fig 12: showing the level of application of sustainable methods to save energy  
The bar chart above shows the level of application of sustainable features or methods in order to save energy with the school campus. 56% of respondents are neither agree nor disagree while 20% are disagree and 20% are strongly disagree with the application of sustainable features or methods in order to save energy within the school campus..

## **Reduction of water use:**

Fig 13: level of application of sustainable methods for water use

reductionThe above bar chart shows the level of application of sustainable features in order to reduce the consumption of water. The majority of respondents neither agree and nor disagree while 28 % disagree with the application of sustainable feature in order to reduce the consumption of water in their school environment.

## **Community planning and design:**

### **Green spaces:**

Fig 14: showing the level of efficiency of green spacesThe graph above shows the level of efficiency of green space form the students and teachers point of view. It shows the following: 24% agree12% strongly agree16% disagree4% strongly disagreeAnd 4 % neither agree nor disagree with the efficiency of green spaces within their school environment.

### **Secure design:**