

Investigating the Rental Cost Between Students Living in Halls/ Housing Accommodation and Comparing the Energy Efficiency in the Properties

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Introduction

The expenditure on accommodation for students living in the UK is a topic thousands of university students encounter every year. Deciding on the type of accommodation to rent can be a struggle in terms of cost cutting and saving whilst studying. A comparison between two classification of accommodation will be researched. Research on the different types of accommodation exists, but hasn't be clearly outlined in order to help students decided on the type of accommodation they should consider when living away from home. Halls/housing are two types of accommodation students will typically go for when deciding to study away. Choosing the type of accommodation also means paying bills such as electricity and heating, which all contribute to the CO₂ produced from that specific accommodation. The main aim for this research proposal is to identify the energy efficiency in these types of buildings and outline the better option. There's a need to understanding the energy efficiency and energy consumption in student living to help save thousands throughout the year.

Another important aspect of student living that this research will look at will be the maintenance of the accommodation. The research conducted will also include research on what type maintenance procedures that could be adopted within the type of accommodation students settle for and the improvements that can be applied to student living to better their energy efficiency. In previous research Improvements to accommodation hasn't been discussed in depth in order to reduce the CO₂ emitted from these type properties. Maintenance on these properties would need to be kept up to date ensuring the safety of the occupiers. This topic is an informative topic that should give students a better understanding in acquiring the appropriate accommodation.

Research has been carried out to an extent on how much accommodation costs in different parts of the country, but this research topic will specifically be based on the energy efficiency used within the accommodation on a monthly/yearly basis (Paul Ellett, 2018). A research paper on the in-use energy performance evaluation of a UK student accommodation was release in November 2012 (Keyur Vadodaria). The research in the 2012 paper covers the low carbon emission back ground and also offers suggestions on how to better emissions in accommodation around the UK. However, comparison research on the cost of housing and halls is the main target for this paper and also briefly outlining the energy efficiency of those properties. This research topic is a rationale study and needs to be investigated further in order to educate students on the importance of global warming and implement strategies that will contribute to reducing the carbon footprint (CF), which is currently rising. Energy efficiency in all kinds of buildings and the CF emitted is a contribution to climate change in terms of globing warming around the world and finding solutions to reduce emissions is the main goal.

Literature Review

Energy efficiency and energy saving is an important factor in everyday use, which contributes to CO₂ emissions released into the atmosphere causing global warming to accelerate. Student living in halls or housing dwellings both contribute to CO₂ emissions depending on their energy use. The two different styles of accommodation will be reviewed separately reason for this is the difference in size and space. Living cost can vary depending location and size of properties. There's a difference in cost around the UK, Wales being the cheaper option as accommodation costs rise in England and other parts of the country. Paul Ellett (2018) conducted an annual survey to find out the type of accommodation students opted for. The results show a large percentage of students living

in university halls at 41%, privately rented at 25% and the rest were split between living at home and other means of accommodation. The survey findings make the research topic interesting when the energy use prices are included in comparison between the two types of accommodation. Living in halls has an advantage when it comes to paying bills. All bills are included in with the rent, which means throughout the month, all accommodation expenses are paid for. On the other hand living in private rented accommodation doesn't cover costs such as electricity and heating bills as these would have to be paid separately. Paul Ellet also stated that the average monthly price when living in halls is roughly around £214 weekly whereas housing roughly around £533-£770 monthly (Paul Ellett. 2018). With efficient building materials and making positive changes rental prices can be reduced by improving the energy efficiency of the buildings. Living in halls and having a fixed price on electricity and heating at any given time would increase the amount of emissions emitted from the building. Living in private rented housing gives the user a conscious understanding on the energy being used in the property in order to obtain lower monthly bills. Gathering more reliable results from an estate agent would be beneficial to see the exact numbers in order to compare the energy consumptions produced from the two types of accommodation.

Dr Lee Davies (2016) also conducted a survey on wider scale gathering data from five different universities comparing data on how energy efficient students are in different universities. He also found that 506,000 of the 2.3 million students that attended Higher Education in the UK which is (22%) stay in halls each year (Unipol, 2008; NUS services, 2008). The approach in this article is to clearly point out the positive and negative factors of living in halls in terms of energy efficiency and saving costs. The data collected outlines the energy efficiency in halls, but the efficiency can be improved in various ways. Over 500,000 tonnes of CO₂ emissions are generated from halls residence in the UK, which is a huge number considering the rise in emissions in the last few years. The Climate Change Act 2008 outlines a path on what the governments ambitions are by 2050. The ambition for the government is to lower greenhouse gases to at least 80% before the year 2050 and improve on the 1990 levels (GOV, 2017). Global warming is at an all-time high and is expected to keep rising.

Halls/housing dwellings serve the same purpose, but they differ in size, which is interesting for this research proposal to identify and understand the energy uses. Comparing the energy uses in these two buildings would be beneficial and also give thought to improvements that could be implemented into these dwellings. Understanding the performance of these dwellings when electricity and heating is used would help identify problems that could be rectified by introducing renewable energy technologies which would contribute to reducing CO₂ emissions. Introducing renewable energy resources to halls and housing would improve the CF emitted. The research that has been accomplished, provides clear and precise information to understand the energy efficiency in student accommodation. Following on with the research conducted in the past my research will contribute significant findings and will inform students on energy efficiency of such accommodation.

Aims and Objectives

Aim:

- To identify the rental cost difference between students living in hall and students living in housing.

- To investigate the energy efficiency in the two types of dwellings and identify the CO₂ emission emitted.

Objectives:

- Data sets for the energy efficiency of both properties will be collected in order to compare and contrast the results.
- The data obtained will be analysed in order to establish the most energy efficient living environment for students.
- To make recommendation for improvements that could be beneficial to the type of properties chosen.

Methodology

The methodology that has been chosen and will be applied to the research study to gather the information required will clearly outline the key factors that would benefit student accommodation, but contribute to the constructive and informative research that has already been conducted. To gain accurate information on the cost of living in housing/halls, collaborating with an estate agent to obtain such information would be helpful in acquiring specific results. For halls information such as electricity bills, heating bill and rental costs would be easy to obtain from an estate agent, whereas with housing such bills would prove difficult to obtain. In housing bills are paid separately by the occupiers whereas in hall bills are included in with the accommodation costs. An estimated price can be obtained from estate agents as they deal with various properties. With the estimated price it is easier to compare the properties rental costs on a monthly/yearly basis.

The two types of properties that will be researched would need a condition survey outlining the defects that could affect the energy efficiency of the property. Carrying out a condition survey and pinpointing potential areas in the building that could allow heat loss is important as this could effectively result in a higher consumption within the property. A dwelling needs to be soundly constructed in order to perform efficiently and comply with the buildings Energy Performance Certificate (EPC). EPC testing is one way to determine the buildings capability and determine whether it is energy efficient. All rented and sold properties require an EPC by law before they can be rented or sold. A professional in this field would be required to carry out this type of testing. This type of data can be obtained from an estate agent as not having the expertise and knowledge in this field would prove difficult to gather such data to compare for both properties.

The energy use in a dwelling is also dependant on the number of individuals that reside in the property. Quantitative method is the approach that will be used in this research proposal gathering information required by producing a constructive questionnaire that would cover the various points within the research in order to obtain the data needed. The questionnaire would contain information about the properties and how they are used at different times and what appliances are used the most and how often during the day. The questionnaire would have to be constructive in order to obtain useful information that would contribute the findings and also contribute to the results. The data that will be required for this investigation will be the different appliances used in the dwellings. The electricity and water bills on a monthly/yearly basis and the size of the properties. Other data sets that will be collected for analysis will be the materials in and around the buildings. This information will be useful on the improvements of dwelling components that would contribute to reducing the CO₂ emission emitted. It's important to understand the

characteristic of both buildings in order to pass judgement on the inefficiencies the properties might have. Upon collecting the data required, it will then be analysed accurately pinpointing the deficiencies within the properties. After analysing the data recommendations on the ideal building will show in the results in order to acquire the appropriate property and save money in the long run.

Results

The results from the questionnaire and the various methods used to obtain other relevant information required will be analysed in charts and graphs illustrating the findings. With the methods used the outcome that would be expected is to have two separate data sets each containing the breakdown of the monthly/yearly spending on rent, electricity and heating bills. Other information that would be expected in the findings would be the survey results of both properties and the energy efficiency of the dwellings. An analysis on the materials used for the building and the various uses would be expected in the results. Pinpointing the strengths and weakness on the components used and how efficient they are is key in the results section because part of the research proposal is based on the improvements that could benefit the dwellings. The results should show the least energy efficient property of the proposed properties.

Evaluation

This research proposal would contribute to the research that has paved a way for more research to be conducted in order to reducing the CO₂ emission emitted from the dwellings proposed. Our climate is changing rapidly and global warming is at it's highest. It's our duty to do the best that we can to implement ways that could benefit our environment. This research proposal aims to identify the pros and cons for student accommodation giving students a better understanding on the energy used within those properties. With the technologies, materials and resources we possess today, it's becoming easier to develop more efficient building components. The problems faced when conducting this research may limit the scope of the research topic. Not having the expertise in specific areas would hinder certain parts of the research in terms of inadequate data collection, which would affect the outcome of the results. This research may have constraints such as lack of equipment to measure certain data sets and lack of time. This research proposal will be a significant contribution to future research topics in this field of work.

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