

DISSERTATION PROPOSAL

“Role of natural and artificial light in architecture.”

Introduction:

The subject of the dissertation is role of natural and artificial light in architecture. In this context, natural and artificial light is analysed. The aim is to attempt to indicate the role of light in the process of creating buildings in architecture as well as to combine aspects resulting from the impact of light on people in buildings.

The work distinguishes types and topics of buildings in terms of design plans, the possibilities of different levels of artistic expression introduced into the space of light intensity and human influence in a visible and invisible environment. In this context, the character of the building is introduced, which connects to the game environment by means of light outside and inside the building

Methodology:

Through direct access to literature, data will be analysed using sources from the university library, websites, abstracts and articles. The selected literature is an ideal basis for achieving the intended goal. In addition, a survey will be created to help me achieve the goal. An action will also be taken to visit two buildings in Wales and one in England. One of them is the Wales Institute for Sustainable Education by David Lea and Pat Borer, Machynlleth and Castell Coch in Cardiff, Wales. Original castle 11th – 13th centuries; Rebuilt 1875–9, architect William Burges. The last will be the Bloomberg European Headquarters building, London, UK - Tillotson Design Associates and Foster + Partners which was opened in 2017. Each of them has a different application and the view of artificial and natural light in space that affects humans.

In the light of the above data, a research problem has been formulated, which can be described as an attempt to answer the question: What effect does artificial and natural light have on architecture of space, which affects human well-being?

AIM:

To investigate a comparison between artificial and natural lights for spaces and health in buildings.

OBJECTIVES:

- data sets will be based on architects' construction describing the role of light in building space

- data will be extracted through the impact of human health on natural and artificial light in architecture
- the data will be compared to whether there are points of reference to natural and artificial light for man
- datasets will be extracted showing the impact of artificial light on construction today
- data resulting from modern lighting technology in buildings and human aspects of mental and physical basis and architecture
- data sets will be based on the resulting survey
- the data will be extracted by visiting three buildings that will give rise to a different time period

Literature:

- Dean Hawkes, "The Environmental Imagination: technics and poetics of the architectural environment", Routledge, London & New York, 2007
- Juhani Pallasmaa, "The Eyes of the Skin: Architecture and the Senses" Hardcover – 13 April 2012
- Konis, Kyle, Selkowitz, Stephen "Effective Daylighting with High-Performance Facades" Emerging Design Practices 2017
- Mohamed Boubekri, "Daylighting, Architecture and Health" Building Design Strategies, Transferred to Taylor & Francis as of 2012
- Castell Coch Paperback – 1 Jan. 2005, by David McLees, Publisher: CADW Welsh Historic Monuments; Rev. ed edition (1 Jan. 2005)

Limitations:

Due to any restrictions, random accidents or problems closely related to the state economy. There may be delays. In the era in which we live and experience accidents such as a general developmental pandemic through Covid-19, I would like to point out that visiting certain places may prove difficult to do. My research will be continued through surveys and literature that I can fully use.

Timeframe:

1. (10.2020)

Check with your supervisor and get permission to continue the process and continue working

2. (Literature read during the summer break)

Carefully read the literature that you will apply when starting work.

3. (11.2020)

Develop a survey.

4. (12.2020)

Send the survey and the first and possibly second chapter to your supervisor

5. (01/02/2021)

Drawing additional conclusions, make additional chapters of your work

6. 02.2021)

Send the first outline to your supervisor. Get feedback from your supervisor.

7. (03.2021)

Modernize the survey and submit.

8. (end of 03.2021)

Check the survey results and create tables.

9. (04.2021)

Collect feedback from your supervisor.

10. (04.2021)

Check the results of the analysis.

Create a sketch to end the dissertation.

Make conclusions.

11. (end of 04.2021)

Main version and chapters.

Final lessons learned, get feedback.

Correction.

Print and send.

Conclusion:

Based on the presented human needs, I try to indicate the role of light in terms of a particularly important field, because it gives the viewer a unique opportunity to experience the space in buildings, playing with light. The work defines architecture buildings as composed of light factors, which together must form a uniform composition. Based on the analysis, it is assumed that in the era of rapid visual changes resulting from the development of an economic approach to buildings, properly designed lighting space will remain a factor attracting architecture, as well as these factors show the specific impact of human health in mental and physical terms.

Reference

Books:

- Dean Hawkes, "The Environmental Imagination: technics and poetics of the architectural environment", Routledge, London & New York, 2007
- Juhani Pallasmaa, "The Eyes of the Skin: Architecture and the Senses" Hardcover – 13 April 2012
- Konis, Kyle, Selkowitz, Stephen "Effective Daylighting with High-Performance Facades" Emerging Design Practices 2017
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- Castell Coch Paperback – 1 Jan. 2005, by David McLees, Publisher: CADW Welsh Historic Monuments; Rev. ed edition (1 Jan. 2005)

Websites:

- https://whel-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=44UWTSD_ALMA21177469780002421&context=L&vid=44WHELF_UWTSD_VU1&lang=en_US&search_scope=CSCOP EVERYTHING&adaptor=Local%20Search%20Engine&isFrbr=true&tab=tab1&query=any,contains,Eyes-Skin-Juhani-Pallasmaa&sortby=date&facet=frbrgroupid,include,361184432&mode=basic&offset=0
- <https://www.sciencedirect.com/book/9780750667241/daylighting-architecture-and-health>
- <https://epdf.pub/the-environmental-imagination-technics-and-poetics-of-the-architectural-environm.html>
- <https://www.springer.com/gp/book/9783319394619>

Blanka Grobelna 1708723

Dissertation Proposal/ Synopsis