ACADEMIC COURSE: «PRINCIPLES OF VOLUMETRIC-SPATIAL COMPOSITION» - AN EXAMINATION OF THE INTERPLAY BETWEEN ARCHITECTURAL FORM AND CONCEPTUAL THOUGHT THROUGHOUT THE CREATIVE PROCESS

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The architectural components inherent in volumetric-spatial composition, as explored within the framework of academic curricula, not only determine the external manifestation of architectural-spatial structures but also exert a profound influence on their conceptualization. The current theses scrutinize the interplay between the study of form and architectural principles and the conceptual cognizance of students, thereby shaping their innovative approach to design.

The interplay of form and idea: a psycho-pedagogical facet in the pedagogy of architectural creativity. Through an examination of the educational exploration of architectural facets, this study delves into the psychological and pedagogical dimensions of students' engagement with conceptual thinking. The intricate intellectual and artistic dimensions of the process, wherein concepts and ideas undergo transformation into architectural forms under the impetus of the creative endeavor, unify conceptual thinking with the technical prowess of the architect. The ensuing discourse elucidates the sequential stages intrinsic to this intricate process:

1. Conceptualization of Ideas:

The initial phase of the creative process involves the conceptualization and formulation of ideas, deriving inspiration from a spectrum of sources such as the natural environment, socio-cultural contexts, or arising in response to specific problems or challenges. This marks the commencement of the creative trajectory undertaken by architectural students.

2. Analysis and Scholarly Inquiry:

Following the conceptualization phase, students engage in a comprehensive analysis of the conceived ideas. This analytical process serves to elucidate the inherent

potential of ideas and concepts, discerning key elements that possess applicability for integration into architectural forms.

3. Synthesis and Optimal Solution Selection:

Subsequently, students pivot towards the discerning selection of optimal elements gleaned from the analytical process. These selected elements are then intricately woven together into a unified and harmonious conceptual framework. This stage necessitates the synthesis of diverse ideas into a coherent visual representation that defines the architectural project, as depicted in Figure 1.



Figure 1. Sketch-Idea of Volumetric Composition

4. Generating Drafts through Clay Modeling:

In the process of refining the conceptual framework, the student of architecture engages in the creation of a clay model. This stage marks the transformation of abstract concepts and ideas into tangible architectural forms. The student meticulously attends to details, makes decisions regarding material selection, and employs various techniques to comprehensively actualize the envisioned architectural composition. Figure 2.



Figure 2. Plasticine Modeling of Volumetric Composition

5. Stage of Implementation:

The concluding phase entails the realization of the plasticine model into a completed work, implemented through materials such as plaster, paper, or by employing techniques such as 3D printing, among others. Consequently, the

conversion of abstract concepts into spatial solutions represents a pragmatic facet within the realm of architectural education (refer to Figure 3).



Figure 3. Volumetric Composition Printed on a 3D Printer (from sketch-idea to finished work)

References

1. Tulmyn S. «Kontseptualnыe revoliutsyy v nauke» [Elektronnyi resurs]. Dostupno: http://www.philsci.univ.kiev.ua/biblio/Tulmin.html/ Data zvernennia: Berezen 29, 2023

2. Moliako V. O. «Kontseptsiia vykhovannia tvorchoi osobystosti». Radianska shkola, № 5, s. 47–51, 1991.

3. Rudolf Arnheim. The Dynamics of Architectural Form. University of CaliforniaPress,1977.[Elektronnyiresurs].Dostupno:https://books.google.com.ua/books/about/The_Dynamics_of_Architectural_Form.html?id=QrHtrH6k07EC&redir_esc=y. Data zvernennia: Berezen 29, 2023

4. Remizova O., Novak N. «Istoryko-henetychnyi metod navchannia arkhitektora kompozytsiinoi tvorchosti». Naukovyš visnyk budivnytstva, t. 108, vypusk 2, s. 4-11, 2022

5. Robert Venturi. Complexity and Contradiction in Architecture. New York: M.O.M.A., 1966. [Elektronnyi resurs]. Dostupno: https://www.moma.org/d/pdfs/W1siZiIsIjIwMTkvMDcvMDEvOHI4MnI1aW1qcV9 XZWJTYW1wbGVfQ29tcGxleGl0eV9Wb2xfMWFuZDIucGRmII1d/WebSample_C omplexity_Vol_1and2.pdf?sha=de7bd6b30f97ab4e. Data zvernennia: Berezen 29, 2023

6. Yolon P. F. «Naukova teoriia ta yii osoblyvist v humanitarnykh naukakh». Lohika i

humanitarni nauky. Kyiv, s.7 – 26, 1971.

7. Krykshtopaitys Y. «Ydeia tselostnosty v poznanyy fyzycheskoi realnosty». Nauchnoe znanye: kontseptualnaia systematyzatsyia. Vylnius, s.97 – 119, 1987.

8. Mykhailenko V. Ye., Yakovliev M. I. Osnovy kompozytsii (heometrychni aspekty khudozhnoho formotvorennia): Navch.posib.dlia stud.vyshchykh navch.zakladiv. Kyiv, Karavela, 2004.

9. Obidniak M., Bilinska O. Arkhitekturna kompozytsiia. Kurs praktychnykh zaniat ta zavdan : navch. posib. Lviv, Lvivska politekhnika, 2011.

10. Shapoval N. Prykladna teoriia arkhitekturnoi kompozytsii: Navch. posibnyk. Kyiv, KNUBA, 2000.

11. Yaremkiv M. M. Kompozytsiia: tvorchi osnovy zobrazhennia : navch. posib. Ternopil : Pidruchnyky i posibnyky, 2005.