

## Design and Development of a Range of Photography Lighting Fixtures for use in a Portrait Studio



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**Keywords:** Design, Studio Lighting Fixture, Concept, Functionality, Aesthetics

**Abstract:**

Photography is all about light. Outside shooting photography is at the mercy of the ambient or existing light, typically sunlight and whatever source that reflects sunlight. Studio lighting on the other hand will let the photographer control the light, its source and the objects that reflect light on a set. But the problem arises for the placing of all these setups. Here comes the importance of a Studio Lighting Fixture to meet the design specification to fit to this small space and shape.

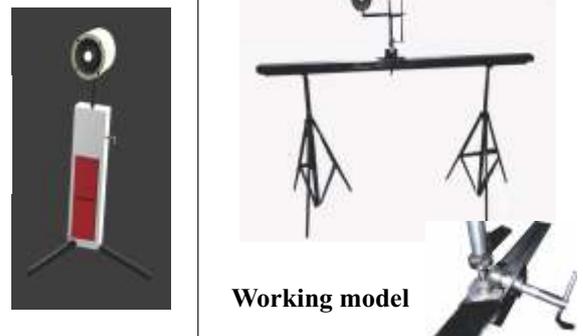
Project work started with literature survey to understand the present technological and economic situations of the Studio Lighting Fixture. Market study was conducted to evaluate the major players and competitors in the industry. Process study was carried out to understand the various processes behind Studio Lighting Fixture. Ethnography research, questionnaire survey and personal interviews were carried out in various Studios and professional centers.

Five different concepts were generated for Studio Lighting Fixture using QFD, PDS and brain storming method. Guide Rail and Bevel Gear Mechanism was selected as Final concept through weighted ranking method. Selected concept uses a guide rail system for the light to be fixed and the movement of the light happens through this Guide Rail. A bevel gear Mechanism is also attached for the up and down movement of the light and also the 360 degree rotation of the light. As the fixture incorporates all the lights on this single guide it makes the studio space free and makes it unique for using.

Final concept of Studio Lighting Fixture was taken up for further designing and detailing using digital software like Alias, Catia, and Key shot. A full scale working model for this fixture was made for the validation of the performance of the selected concept and getting the user feedback.



**Various concepts of photography lighting fixtures**



**Working model**



**Final product**