

LIGHTING SCHOOL PROJECTS

P R O J E C T O



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School projects are interesting as these are spaces where young pupils develop their intellect, channel their inspirations and realise their capacity for a full life of interests and professional activities.

Following this premise, it is also exciting for professionals developing school projects to innovate and bring new life to these projects where you aim to inspire as much as you aim to be functional, efficient and cost effective.

Everything usually goes well on the drawing board while

you're workshoping spaces with architects and interior designers providing creative and efficient lighting design solutions. I believe the design team is at its core the 'cradle of new ideas', always happy to innovate and create new scenarios where solutions can transform the perception of space, especially through lighting.

After working on the lighting design of a prestigious university with 38 intertwined buildings (New York University Abu Dhabi, by Rafael Vinoly Architects), and a large scale

school in Dubai (Kent College Dubai, by architects Broadway Malyan), the new Dubai College reception building, by GAJ Architects, was an exciting project to take onboard.

Designed by Jason Burnside, the innovative architecture of the reception building and refurbishment of the school has already won awards including educational project of the year in 2017, and is still receiving amazing reviews from critics, scholars and students.



The challenge here, as per most projects in Dubai, was in having enough control over the final design so that the lighting specifications would stand. In other words, keeping the specification and avoiding damaging VE (Value Engineering) exercises.

The reception building of Dubai College is now the new iconic entrance of the school, and the design intention from the lighting point of view was to have it shine from within, elevating the already suspended architectural volume through the use of light.

To achieve this, the lighting design strategy considered some important surfaces as focal points to be washed with light, as the entrance façade, the two vestibule walls that lead to the reception, the interior timber walls of the main reception (only solid walls of the Reception area considering the other three walls are glazing), and

the high level soffit of the reception lounge. Also, the main walls of the interior feature staircase and one wall within each of the office spaces inside the building (to provide vertical illumination, assist in the overall ambient lighting, and create a focal reference from the external view towards the building).

The consistency in the lighting of the interior offices was also part of the brief as the spaces should be flexible and allow for future change in furniture layout, which was addressed in the design and backed up with calculations for the minimum quantity of light fixtures with optimum delivered light levels.

As much as I'd like to highlight only the high points of the project, I believe it's also important to discuss the actual problems the lighting design community is facing on projects.

In the first instance, the

budgets for projects have been significantly reduced throughout the construction market. Especially in school projects (in contrast to hospitality projects) most projects are 'design to budget'. And today, considering the competitive market of lighting manufacturers, it is often that low quality fixtures are being presented to contractors as cheap alternatives to meet budget requirements. Having said that, I am happy to say that in this case the quality of the light fixtures has been maintained, (although) a VE exercise was undertaken by the MEP team to meet the client's budget.

The problem with VE exercises is that, often enough, the players involved in the VE exercise don't try to understand the lighting design intent, nor do they discuss the alternative fixture selection with the lighting designer, which translates the exercise to a simple substitution exercise based on spec sheets and



prices, without the review light fixtures' working samples, review of the fixture application and their section details, or the delivered lit effect as designed.

The actual practical consequence of this common behavior goes from negligible to serious. Negligible would be the substitution of downlights that perform similarly, which can be acceptable. Mild would be the substitution of a wallwasher for an asymmetric downlight which the alternative manufacturer calls 'wallwasher' for lack of a better name or for lack of the proper understanding of the lit effect a proper wallwasher should deliver to a wall (which unfortunately can be often found in many manufacturers' catalogues). Mild but also negative is the substitution of linear LED strip without retaining its accessories as specified (e.g. a metal profile with opal diffuser) considering that without the opal diffuser the dots of the linear LED are visible in

reflective surfaces, which brings a poor visual result. Serious is the substitution of a ceiling washer fixture for a linear LED strip, creating only a glow in the ceiling instead of providing the actual contribution to the light levels expected from the calculations. Also serious and unacceptable is the substitution of an in-ground recessed wall washer for an upright fixture, to be located outdoors to wash the entrance façade wall, location which the specs sheets alone would not be able to clarify.

Fortunately, in this case, most of the serious problems were captured and the fixtures reverted back to the original specification, but there were other substitutions that were carried forward to the detriment of the project and end result.

For a happy ending I may say that, fortunately, the positive points outweigh the negative points, which makes this a successful project.

It is well-known in the professional practice of lighting design that these issues occur, but it is important for us, as a professional community, to discuss these issues and educate one another, and allow ourselves to overcome problems through experience, sharing our case studies and points of view, to make our profession stronger, avoid reoccurring problems, and deliver quality projects time and time again.

Dubai College is a success story, with lessons learned and much excitement in the process of delivering a complete project. A passion for lighting during the design, tender and construction process is a part of its success.