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## The Future of the Construction Industry: Benefits of Modular School Buildings

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Modular construction is slowly but surely taking over the construction industry. You might be wondering why should you opt for modular construction when conventional on-site construction is a tested and proven way of building? Well, there are numerous reasons why modular is the future, not only for constructing residential buildings but for commercial ones such as schools as well. Modular construction has come a long way within the education sector since the old, cabin days when portable classroom units were a solution to rapid demographic shifts in public schools that were on a budget.

The advances in modular finishes and designs combined with the ability to complete construction quickly and the low cost of construction have solved most of the challenges that schools faced when an expansion was in order. Over the past decade or so, contractors and architects have worked with school districts to substitute portable classroom modules for permanent units that are not only cost-effective but provide a high-quality learning environment as well. This effort prompted a growing opportunity for modular construction. Companies that specialised in portable classroom modules now also provide permanent modular units that are packed with sustainable features to improve the classroom's environment and the students' learning experience.

### Environmentally-Friendly and Sustainable

Modular schools are highly sustainable and **energy-efficient**, combining low-maintenance materials with cutting-edge technology for exceptional performance and comfort. At the same time, they feature a custom, sleek look with the convenience and speed of a modular product. Furthermore, **modular school construction** is low-maintenance and energy-efficient. These savings can stretch the school's limited resources and can be used for salaries, supplies and better school programs. Eco classrooms require just half the amount of energy used to build typical classrooms since there is almost zero waste in the modular building process. All the extra materials are recycled and used in other projects, which helps reduce millions of tons of waste that would otherwise end up in landfills. Talk about reducing carbon footprint!

### Faster and More Flexible

Constructing additional classrooms on-site will disrupt teaching and learning. Plus, safety and health concerns are involved when there are children near construction sites for an extended period of time. Such issues aren't a problem with modular construction since the module is built in a

controlled environment. This, in turn, leads to the module being completed in a much shorter time than it would take to construct the same object on-site. This is due to the fact that construction teams use convenient pieces of equipment and repetitive techniques. There aren't any unforeseen delays due to bad weather or some other external factors.

This allows the school to be more adaptive to the changing trends, so modular builds provide an easy solution to a very complex problem. They can be customised to fit the specific aesthetics and needs of the facility and can be seamlessly integrated within the existing campus. Furthermore, the new modular building can complement the architectural scheme of a brand new school.

Modular school construction provides various multi-functional facades and floor plans adaptable to meet a wide range of uses – from office spaces and classrooms to labs, libraries and even restrooms. The flexibility of modular construction's core design enables schools to meet their immediate needs, and provide long-term value at the same time. This kind of construction can evolve over time and expand to accommodate future growth, shifts in functionality or even upgrades to increase cost and energy efficiency.

### **Greater Quality Control**

Modular construction passes through more quality controls than conventional construction. The materials are delivered and inspected at the manufacturing facility, where they should meet stringent quality standards. Then, they're stored safely in a warehouse or a manufacturing facility in order to prevent deterioration and damage from the elements and moisture. The materials are installed without any exposure to wind, rain, or extreme temperatures that can negatively impact their quality.

Further, each stage of the modular construction process goes through quality control stations which feature thorough checklists that monitor the quality of the workmanship. There are supervisors and quality control inspectors who travel from station to station to ensure everything meets the necessary criteria. Nowadays, modular construction design teams incorporate various features, including mould-resistant dry walls, improved natural lighting and ventilation systems. All that while striving to provide a healthy environment and maximise the occupants' health.

In on-site construction, the construction teams typically consist of various different subcontractors, which can easily lead to miscommunication, misunderstandings and fragmentation during the completion of the project. Modular construction teams, on the other hand, consist of only one team, which gives them a significant advantage when communicating with each other.

Fragmentation can result in lower-quality work. For instance, in an area where one subcontractor's scope of work interfaces or overlaps with another's can be a regular cause of deficiency. Modular construction companies don't have this problem as they have consistent teams of tradesmen at each facility working together for a long time. This leads to continuous improvement and collaborative experience, resulting in a quality product every single time.

### **Modular Construction is the Future**

Modular construction meets all objectives and targets within regulations while providing an extremely efficient option for delivering projects on budget and on time. Modular units are carefully planned and designed to suit specific requirements, and the fact that they're constructed in a strictly controlled environment ensures the specified accuracy levels are met successfully

every time. This allows urgent school structures to be designed quickly without disruption, enabling schools to continue delivering crucial services by remaining operational. By promoting efficiency, modular construction also **lowers waste** throughout the construction life-cycle. All of this makes modular construction the preferred option in the education sector as it's the most progressive and sustainable solution.

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