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CHAPTER 2: LITERATURE REVIEW

2.2 Understanding the concept of modular low rise housing

According to Lawson, Ogden and Bergin (2011) the modular building or homes are considered as houses or prefabricated building which covers several sections that are known as modules. The sections of module are sometimes constructed off site and then sent to the original location of the buildings. The method used for building such kind of houses is known as permanent module construction. According to Lawson, Ogden and Bergin (2011) in current era the scope of construction industry is increasing towards the modular housing. Modular construction refers to those buildings which are having prefabricated structure of rooms and are properly suitable for commercial workings. In this context, Jellen and Memari (2013) stated that modular low rise buildings are used for several purposes such as schools, classrooms, industrial facilities, and construction camps etc. These kinds of housing can be acquired by moderate income level people on the basis of their requirement especially in remote or rural areas. The trend of low rise housing is applicable under the urban where it is generally difficult to use to conventional construction methods.

Lee and Lim (2012) asserted that lean manufacturing is the suitable method for constructing the off-site operation for building the modular housing. Furthermore, Lee and et. al., (2014) asserted that contractors engaged with building of modular housing very often work with traditional general contractors so they can easily exploit the available resources. This facilitates to complete the work in less time and also save the cost to a great extent. Lee, Bae and Cho (2012) asserted that modular buildings are a set of structure which is pre-built by the engineer that relates to the modules are set as per the factory requirements. In this each module
remains in supportive way so that every single unit is connected to overall structure. Moreover, Christopoulos and Montgomery (2013) stated that students and commercial workers are accommodated with cellular buildings that are particularly associated with modular construction. It indicates that modular buildings are essential for all commercial as well domestic purpose because it provides a systematic way of living with pre-defined structure of buildings and workers can perform activities with efficiency.

Velamati, (2012) mentioned that modular construction is a process which is used for the construction of individual volumes as single and offsite. In this process individual modules are jointly gathered at onsite for building larger modules. Apart from this, Tiramani and Group Inc, (2013) stated that low modular construction refers to development of relatively less length buildings rather than focusing on adding more sections to increase its length. However, Lutton and et. al., (2015) argued that modular techniques facilitates to build high rise buildings also for the purpose of saving the cost. On the other hand, Morton (2011) stated that high quality level will be controlled with help of modular building construction of factories. Through it each section will be highly analyzed and undesired obstacles can be minimized in industries and production will be in adequate manner with quality standard. Therefore, it shows that modular building technique is beneficial for the commercial construction of buildings which will reduce unexpected expenses and save time for construction.

Lawson, Ogden and Bergin (2011) asserted that modular buildings are those structure of buildings which shows the effective use of asset value in form of modular construction. It includes two types of modules that are load bearing and corner supported module which affects the design of buildings. In this context, Bonds and et al., (2011) asserted that modular high rise buildings are those structures which are completely bolted and fabricated together and these
buildings are created by small group of workers. Therefore, it reveals that modular high rise buildings are constructed without use of heavy equipment and buildings shows the high asset value for commercial use and can also be preferred for the domestic use.

2.3 Assessing the factors affecting construction cost in Hyderabad, India

2.4 Studying the influence of modular low rise housing in reducing construction cost in Hyderabad
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