According to Muhammad peace be upon to him “from cradle to grave seek for knowledge". Two recent centuries are characterized by their momentous changes on humans' lifestyle. In spite of these changes, no one can play down the significance of education in developments of societies. Here comes a controversial dilemma whether the most important factor for a student to be successful at university is tutors in university or stimulus from family and friend or high-quality education from high school. I personally contend that high-quality education during high school can be more effective for students to be successful during their university time, and in the following paragraphs, I will elaborate on my viewpoint through three conspicuous reasons.

The first exquisite reason to be mentioned is that if students in universities want to be successful, they should have a firm foundation, and this foundation is the basic lessons that they learned during their high school time. Such as buildings that must be constructed on good quality foundation, students also need to build a good quality for their future education, and if they do not build this foundation they definitely get into trouble in their university time. To shed light on this issue I want to write about my experience that I remember one of my classmates that have trouble with physics, but because of his interests, he chose civil engineering as his university major. Due to the importance of physics in this major, he got into trouble several times during the first semesters and graduated later than us because he dropped several courses which were related to physics.

The second reason that supports my idea is that high-quality education in high school is associated by doing several group projects that can be so essential to be a successful student during university. Because during university time students are asked to do more projects in groups and students need to know how to behave and act in groups. According to an essay in Time magazine, Oxford University which is a famous university around the world ask some questions from students who want to apply for their post-graduate programs about participating in groups and communities during their high school. This question shows that this feature is so vital for universities.

The last but not the least reason is that students by high-quality education from high school have more creativity which is so essential for students during university time to be more successful than others. Students during university time must research which need the high ability of creativeness, and this ability can be improved in high school time. According to a recent empirical study in my country, successful students in the famous university in my country educated in high schools that in these schools they are asked to do several types of researches. These students also participated in several scientific competitions during their high school time such as robotic competitions.

To make a long story short, all the aforementioned paragraphs lead us to the point that high-quality education from high school can be more important for students to be successful during their university time. It can be recommended that high schools pay attention more to their students’ creativity and hire talented and experienced teachers.

The reading passage presents some evidence indicating that the science of archeology was faced with serious problems and limitations in Britain, which slowed down its developement. The lecturer, nonetheless, throws doubt on all the ideas brought up by the critics and offers some counterclaims to refute them all.

The erection of the subassembly for all specimens proceeded as follows: 1- the column was placed; 2- the beams were seated on the stem of the T-stubs were loosely fastened to the column;3- a good fit was ensured between the beam flanges and the flanges of the T-stubs at the column flange; 4- the top angles were placed and all bolts were hand tightened; 5- the strands were tensioned; and 6- the bolts in the T-stubs were tensioned to their standard pretension force. Instrumentation was installed to measure the local and global response of the specimens. Instruments measured loads, displacements, rotations, and strains in the beam.

The self-centering behavior of PTTC is studied using the OpenSees finite element program based on fiber elements. However To evaluate the accuracy of the OpenSees analytical models for simulating PTTC behavior, same modeling assumptions are adopted to model posttensioned connections with angle ED devices based on previous studies. However, from the results of the aforementioned experimental study, the fiber model for the connection will be modified and verified.

Designing around 30 archetypes with different configurations such as different span length, height and in different seismic categories is needed. These frames are designed based on the proposed initial assumptions of Mahbobeh Mirzaie Aliabadi et al and these assumptions are verified based on FEMA P695 methodology by performing pushover and IDA analyses in OpenSees platform to evaluate the seismic performance of this system. Seismic performance factors of this new system is investigated through this methodology too.

Generic moment resisting frames with similar configurations of the proposed self-centering system are designed and the seismic behavior of them will be investigated through the methodology too. After collecting data from the analyses, seismic performance of these two types is compared with each other such as comparing fragility curves and etc.

The cost of the construction of self-centering systems is so important to be investigated. The cost of the construction of generic moment resisting frames and proposed self-centering systems is investigated for each archetype and compared with each other. Prediction of the cost of this type of structure is predicted by artificial neural networks too.

After collecting data from Fire tests, for the second phase, it is essential that the numerical studies are validated by checking against experimental results by Finite Element commercial software such as Ansys or Abaqus. Non-linear analysis is an effective tool to obtain an understanding of how structures behave in extreme fire conditions. Parametric studies are required to see how sensitive designs are to assumptions. However these techniques are already influencing the way major structures are being designed for fire loading because it offer the only reasonable tool to predict actual structural response to fire. In this phase fire distribution in the connection components will be illustrated. Dynamic loadings can be applied on the archetypes to evaluate the performance of the connection under fire condition.

Finally, Fire-induced progressive collapse of the macro models must have been analyzed by computer programs such as OpenSees, FEMFAN, Vulcan and etc. OpenSees is an open-source object-oriented software framework developed at UC Berkeley, Heat transfer analysis can now be performed in OpenSees for various uniform and non-uniform design fire scenarios. Beam-column and shell elements are now available for modelling structures in fire and this software has been recommended for fire-induced progressive analysis of the 2D multi-storey frames with the novel connection. In this section the behavior of the frames with the novel connections under fire-induced component removal can be evaluated in different scenarios and compared with the behavior of special moment resisting frames in this condition. In this evaluation, Nonlinear dynamic analysis is the most precise method and the place of plastic hinges and tensions in the components (axial forces in columns) can be assessed and shown.