As in the developed nations, developing countries in the Southeast Asian region increasingly are recognising the important role higher education plays in enhancing the human resources of a nation for promoting its development in a world of depleting natural resources. Advances and pervasiveness of ICT in the society mean that higher education systems in the region are increasingly leveraging ICT in handling the many arising challenges faced by higher education systems in Southeast Asia. Some of the possible roles of ICT in higher education in the face of these challenges discussed in this paper are what and how students learn, when and where students learn, who the new faces of students and lecturers are, and ways to reduce the cost of education. However, research-based knowledge on how ICT has been and can be used to enhance the design, delivery and management of higher education programs in the Southeast Asia region is not readily available. Furthermore, countries in Southeast Asia are at different stages of development in the use of ICT in education. Thus, success stories, experiences and lessons learnt from the use of ICT in higher education will be of immense importance for educators and administrators who are at the forefront of integrating ICT for higher education in countries in the region.