

The Impact of Technology Innovation on Higher Education Institution in South Africa (A Case Study of a Private and Public University in Johannesburg)

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Abstract

Technology has demonstrated its disruptive potential in business and human activities, particularly in the service industry, as well as improving education and knowledge. Regardless of the growth of technology innovation in different industries, its impact on educational industry is unnoticed, specifically in light of the current Industry 4.0 based technology innovation. The revolution of technology over the years has created possibilities for improving the teaching and learning method which were totally absent before the third industrial revolution. In contrast to many innovation research, including that of the fourth industrial revolution, which has concentrated primarily on computers and manufacturing, just a few studies have examined how technology innovation is revolutionising the service industry, particularly the education industry. The aim of this study focused on the impact of technology innovation on higher education institution in South Africa. First it investigated the effect of technology innovation on learning using the flipped classroom model. Secondly it analysed the impact of technology innovation on learning using the Moodle learning method. Thirdly it examined the influence of technology innovation on students' attitude. Fourthly it assessed the effect of technology innovation on students' satisfaction. Then lastly it examined if demographic factors (such as age and gender) have a moderating effect on the relationship between technology innovation and student satisfaction.

This study found a high positive relationship between technology innovation and Moodle learning method of learning. Also, there is a positive significant relationship between technology innovation and students' attitude. There is also a high positive significant relationship between technology innovation and students' satisfaction. However, the study shows no significant positive relationship between technology innovation and flipped classroom method of learning. These findings will assist both government and educators in tertiary institution to develop a theoretical framework with the use of technology innovation tools to better prepare students for the fourth industrial revolution which will foster sustainable development drive for the future of education. The study adopted the positivist paradigm, and followed a quantitative approach in gathering data. The study made use of the survey research method and the data were analysed using regression analysis with SPSS statistical tool.

Index Terms

Technology Innovation, Industry 4.0, Tertiary Institution, Flipped Classroom Method, Moodle Learning Method, Students' Attitude, Student Satisfaction, Age And Gender.