Disruptive Teaching and Learning, and Assessing Engineering Students During a Pandemic Situation.

Antoine Mulaba - Bafubiandi
Mineral Processing and Technology Research Centre, Department of Metallurgy, School of Mining, Metallurgy and Chemical Engineering, Faculty of Engineering and The Built Environment, University of Johannesburg, 37 Nind Street Doornfontein, Johannesburg, 2028, South Africa
amulaba@uj.ac.za and antoinemulaba1@gmail.com

Abstract

The COVID-19 pandemic brought countries into a lockdown situation. This has been experienced globally, some countries earlier than the others, South Africa experienced his from 26 March 2020. The lockdown experiences globally rushed the intensive implementation of the online teaching and learning in many institutions of higher learning with the natural assessing as corollaries. This study was conducted at a comprehensive institution of higher education in South Africa, offering both engineering science and engineering technology programmes. The stratified sample was composed of both learners and lecturers while a Delphi structured questionnaires was used in addition to observation. A pilot study was conducted prior to extending it to the full-sized sample. This paper discusses the experienced hassles and hardship in teaching online mineral engineering and extractive modules to generation Y learners whose majority emanates from communities without prior set connectivity nor related information technology infrastructure. It was observed that while both learners and lecturers were faced with logistics challenges, technology related difficulties in terms of lack of appropriate device, insufficient connectivity and inadequate infrastructure, the online teaching and learning process on its own became a mission. The paper characterises and discusses also the socio-economic strains and stress behaviour demonstrated by both learners and lecturers.

Keywords;

Disruptive teaching and learning, engineering students, pandemic situation