

# **Does Online Attendance Matter? Investigating the link between student attendance and academic performance, University of Embu<sup>1</sup>.**

*Dr. Hezron Mogaka, Dr. Franklin Mairura, Dr. Florence Kaumi , Ms. Lydia N. Muriithi*

## **Abstract**

The COVID-19 pandemic and changing technology space and demands in delivering higher learning has necessitated the implementation of online learning systems. However, little is known and documented on the effectiveness of online learning environments in Kenya. This study aimed at evaluating online learning effectiveness by relating student online lecture attendance in terms of learning hours and learning outcomes. Learning outcomes were defined by the total student performance that included CATs (Continuous Assessment Tests) and final semester examinations for a common unit (Fundamentals of Development and Its Application) that was offered to first year students at the University of Embu, Kenya for semester 2 in the 2021/2022 academic year. The student attendance data was collected in the online learning system using device log-in data from a population of 493 students that were distributed in different degree courses including Agriculture, Education, Commerce, Finance, Criminology, Economics, and Law specializations. Student attendance data was matched with their total examination result data (concatenated student names and admission numbers) using the fuzzy lookup add-in for Microsoft Excel allowing upto 10 different matches. Class attendance was significantly associated with increased student performance, with students who attended 0-25% of online classes scoring a mean of 18% in the final score. Other scores were as follows 26-50% attendance (44%), 51-75% attendance (62%) and 76-100% (80%). There were also significant differences in the common unit performance by different courses. The preliminary results indicated that students who attended longer online hours during the semester performed better in the final exams, compared to students who attended less lecture hours. Analysis by gender did not reveal significant differences. The study recommends that online learning systems can facilitate learning effectively, thus the systems should be developed to enhance and support student learning through awareness creation on the need for students to attentively attend online lectures. Improved data collection by minimizing errors in student log-in data and monitoring within online learning systems is necessary to enhance student performance and the development of online learning systems.

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