

# Abstract

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## **An adaptive framework for applying cloud computing in virtual learning environment: A case study of “AASTMT”.**

Cloud computing technology as a one of the third platform components assist educational institutes to support and enhance their own VLE's to get access to computing on demand. Cloud Computing could help in providing services and data storage to educational institutes' users without investing capital in infrastructure, which demand to be maintained and upgraded on-site. and this can be considered as a cost-effective solution. This study aims to provide a proposed cloud computing framework using application programming interface (APIs') as a software as a service (SAAS) in Virtual Learning Environment (VLE) at education. The framework is adapted and implemented to enhance the existing VLE to meet the incremental increasing of users' needs and requirements. Different research's methodologies and techniques are used to measure the performance of the systems. Moreover, measure the impact of the adoption of CC on students and instructors satisfaction. In addition, the study identifies and explores that “There is a gap between the advance of adopting CC as a new technology and the benefits of implementing cloud techniques in education”. The findings of implementing the adopted framework equate the study expectations, where the performance test results showed a remarkable changes in the system performance when using cloud computing. Additionally, the users' satisfaction significantly increased in comparison with the existing system. The users found that the system performance and response to their tasks are improved. Meanwhile, the users find that the adapted system based on CC APIs' make it easier for them to achieve their academic activities and goals, while they are still waiting for more improvement to the system.