

Chapter 13

Effects of the Animation Infographic on Learning Retention and Motivation

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ABSTRACT

In spite of a huge library of technological materials available for teachers of Information Technology courses in most tertiary institutions, there are truly limited scholastic resources available on the use of animation Infographics as a pedagogical tool. The challenges of communicating complex ideas of technical nature to students have been exacerbated by the proliferation of information in the golden era of information and communication technology (ICT); hence, the need for developing an effective tool of communication to aid the process of information sharing between teachers and students.

1.0 INTRODUCTION

The study stems from the recognition of gaps in current educational practices, particularly within IT education. Traditional methods often fail to fully engage students or simplify complex technical concepts, which animated infographics aim to resolve. This investigation offers a solution by examining how dynamic, visually rich tools can improve understanding and retention in challenging IT courses, such as Networking and Browsing.

In today's educational landscape, the integration of technology into teaching methodologies is increasingly essential, particularly in Information Technology (IT) education. This study examines the impact of animated infographics as a ped-

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agogical tool to enhance both learning retention and motivation among students at academic universities. The rapid advancement of Information and Communication Technology (ICT) has increased the demand for effective communication strategies. These strategies should simplify complex technical concepts, especially for students who often struggle with conventional teaching methods. This research is based on the observation that many students find IT subjects, such as 'Networking and Browsing,' challenging to grasp. This difficulty is further intensified by the lack of engaging educational resources that enhance understanding and retention. Animated infographics, recognized for their visual appeal and interactivity, are suggested as a potential solution. By transforming traditional course content into dynamic visual formats, the study aims to assess whether these tools can improve student motivation and learning outcomes. A quasi-experimental design was used in the study, which involved comparing an experimental group exposed to animated infographics with a control group receiving traditional instruction. It was particularly suitable for this approach for this context, as it reflects real-world classroom settings where random assignment is not always feasible. The study utilized various instruments-including achievement tests, motivation scales, and satisfaction checklists-to assess the intervention's impact on students' learning experiences.

The literature review highlights the importance of animated infographics as dynamic visual tools that integrate graphics, text, and multimedia elements to convey complex information more effectively. Several studies support the effectiveness of infographics in improving both student motivation and learning retention. For instance, Hassan (2016) and Lankow et al. (2012) emphasized that animation in infographics simplify intricate subjects by transforming static content into visually stimulating material, making complex concepts more accessible. Similarly, Afify (2018) and Peters (2014) demonstrated that animated infographics enhance understanding by catering to diverse learning styles, making the learning experience more enjoyable and engaging for students. These visual tools encourage students to actively engage with the material, thus increasing motivation, as noted by Bicen and Beheshti (2017) and Cifçi (2016). Rezaei and Sayadian (2015) and Gallagher et al. (2017) also found that animated infographics improve information retention by organizing and presenting content in structured, visually engaging formats, aiding students' ability to recall information over time. Despite these advantages, literature reveals gaps in the research, particularly concerning the long-term effects of animated infographics on higher education. There have been few studies exploring this topic impact in higher education, especially in Arab countries like Oman, which presents Research is critical in this area (Afify, 2018; Singh & Jain, 2017). While the current body of research affirms the effectiveness of animated infographics in enhancing motivation and short-term learning retention, more research is needed

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