Digital Infographics Design (Static vs Dynamic): Its Effects on Developing Thinking and Cognitive Load Reduction

The current study investigates the effect of the difference between two styles of infographics (static vs. dynamic) on developing visual thinking and reducing the cognitive load of grade six students in their science course. The researcher relied on the quasi-experimental design. The random sample population included 40 students who were divided into two equal experimental groups: the first group of students was exposed to static infographics, while the second was exposed to dynamic infographics. The experimental treatment of independent variables was done by Wepik and Vyond web applications. Data were collected by two tools, a Visual Thinking Test (prepared by the researcher) and a Cognitive Load Scale (NASA-TLX). The results indicated that there was a significant impact of dynamic infographics on developing students' visual thinking and reducing their cognitive load compared with static infographics. This can be attributed to the diverse stimuli and multimedia elements that dynamic infographics provide, which are compatible with the students' tendencies and abilities, as well as their learning, cognitive and perception styles. Furthermore, the presentation of concepts in a sequential and orderly manner can allow for in-depth understanding and assimilation with a limited cognitive load.