### Chapter 17

# Going Through the Motions: A Partial Survey of Public Online Multimodal Motion Infographics for Higher Ed

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#### **ABSTRACT**

With the learning slippage that occurred in the aftermath of the SARS-CoV-2/COVID-19 pandemic, learning advantages that may be achieved are a topic of special interest. The popularization of online learning has riveted focus to digital learning methods and contents. In formal higher education, various contemporary digital infographics are in use: static, motion, interactive, and immersive. This work explores some of the publicly available and open infographics used in formal learning in higher education to better understand these digital contents. The search for "infographics" is based on a popular referatory for web-hosted digital learning resources, but with a new search feature that goes beyond the curated and peer-reviewed contents that captures the newest relevant contents from the web. The works are analyzed for modalities, topics, pedagogical value, and design for transience to protect against cognitive overload. This is an exploratory research work.

#### INTRODUCTION

With the learning slippage that occurred in the aftermath of the SARS-CoV-2 / COVID-19 pandemic, learning advantages that may be achieved are a topic of special interest. The popularization of online learning has riveted focus to digital learning methods and contents. In the Information Age, with so much available data, many who communicate to the public like governments and companies and organizations use informational graphics as succinct communications objects. In the higher education space, infographics are used, too, for various purposes:

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- to publicize issues,
- to publicize events,
- to punctuate certain learning points,
- to serve as learning prompts,
- to summarize learning,
- to enable and consolidate learning,
- and other applications.

Many instructors and students use desktop software and online Web tools to create learning infographics. This work involves an exploration of infographics made publicly available on the MERLOT (Multimedia Educational Resource for Learning and Online Teaching) referatory and on the Web [per the Smart Search capabilities enabling a federated search (MERLOT Smart Search, 2022)]. The use of a central referatory may benefit given that the respective curated learning resources are hosted on external systems and are pointed to by MERLOT, a cloud-based tool. A pointing feature enables the resources to be hosted on websites, virtual world platforms, online libraries, and other spaces. This might suggest that a search for "infographics" might result in static, motion, interactive, immersive, and combined infographics.

The works are categorized based on general infographic modality: static, motion, interactive, immersive, and combined. "Static infographics" are defined as "still analog or digital visuals that communicate information through text, data, data visualizations, images, and other designed elements (and user experiences)." "Motion infographics" are those that "communicate information through animation (or video), text, data, data visualizations, images, and other designed elements (and user experiences)." "Interactive infographics" are digital visuals that "may be triggered or changed based on user inputs to communicate information through text, data, data visualizations, images, and other designed elements (and user experiences)." "Immersive infographics" refer to "digital visuals in immersive virtual worlds or augmented reality or mixed reality to communicate information through text, data, data visualizations, images, and other designed elements (and user experiences)." And finally, "combined" ones are those infographics that include "motion and interactive" features, "motion and immersive," "interactive and immersive," and so on, on the one screen or slide or object. Also, the formal educational infographics are also categorized based on the topic and inclusion in particular disciplines. Some pedagogical analyses are included.

#### **REVIEW OF THE LITERATURE**

Learning is generally broken out into three areas: formal (accredited and regulated credit-based learning), nonformal (non-accredited course learning, such as in training applications), and informal (learning as a byproduct of life activities that are not specifically designed for learning). Infographics are used in all three spaces. The academic literature includes various works about the usage of infographics mostly in the nonformal spaces, particularly in healthcare. There are also works that describe infographics in data journalism.

Some works focus on formal learning, such as that in higher education, where infographics are seen to contribute to students' "knowledge, skills, and attitudes" (KSAs) (Al-Dairy & Al-Rabaani, 2017, p. 1), which evokes a bridge to work competencies. Various academic studies have targeted the uses of

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