PRACTITIONER FRAMEWORK FOR DEVELOPMENT OF MINIMALIST ANIMATED EDUCATIONAL CONTENT

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Fig.1: John Smith, TIS COVID-19 case example

Fig.2: KILN bird preparing for quarantine

Background

- The COVID-19 pandemic caused a sudden demand for educational technology. The result is a paradigm shift where many want to continue remote learning, but the current quality does not stack up to their in-person counterparts leading to a growing demand for quality educational content and technology.

- Extensive research has been done on educational content and technology, but there has been no research done on the emerging genre of minimalist animated educational content.

- Minimalist animated educational content has the ability to effectively educate and entertain learners in a multimodal fashion to help achieve common goals for educational content.

Methodology

Exemplars for the descriptive study were selected based on:
- number of subscribers (10 million + minimum)
- number of channel views (1 Billion + minimum)
- creation of animated content with an educational focus
  - COVID-19 video from Feb. - Mar. 2020 available for analysis
- Analyzed based on 7 characteristics of educational content

The top two channels and their selected video are:

Kurzgesagt - In a Nutshell (KIAN)
- 18 million + subscribers, 1.9 billion + views
- *The Coronavirus Explained & What You Should Know*

The Infographic Show (TIS)
- 11.5 million + subscribers, 4 billion + views
- *What It's Actually Like To Have The Coronavirus (COVID-19)*

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Practitioner Functional Framework

1. Concision
Adequate cognitive load is crucial for learners since too much content can lead to missed information and diminished retention. *What videos do:*
- Videos exceed 6 min length averaging about 10 min in length
- Focused topic (ie. what does a pandemic mean/what does COVID do to patients?

2. Visual Appeal
Fig. 3, 4 show colors of creativity that are pervasive in the content (orange, yellow, white turquoise, indigo, and purple). The content shows moderate modality, since human animations show some natural motion, for example, but are not trying to look realistic Lack of straight edges and shapes. Curves and circles equate to natural or organic as well as being retro and trendy and creating a sense of warmth and endlessness.

Fig.3: Kurzgesagt.org landing page image

3. Engagement
Humor makes content more memorable and engaging. *What videos do:*
- KIAN - "wash…hands as if you've just cut…jalapenos and want to put in your contact lenses", Toilet paper animation
  - Humor is used to enhance memory of important points, in this instance, ones involving public health
- TIS - COVID-19 contraction from snake CPR in Wuhan and forced humor, including in the demise of the actor
  - Narrative to lighten the mood, in this instance, on the dark topic of succumbing to COVID-19

4. Reinforcement
Educational videos are multimodal because of the pairing of, in this case, animations and narration as well as optional captions for textual reinforcement. There is no interactive element, notably, but can be reviewed at the learner's own pace.

Fig.4: TIS person in hazmat suit visits before John Smith passes

5. Credibility
What videos do:
- Fig. 2-4: Accurate animated COVID-19 virus compared to CDC
- Include source lists in video descriptions - scholarly to open source
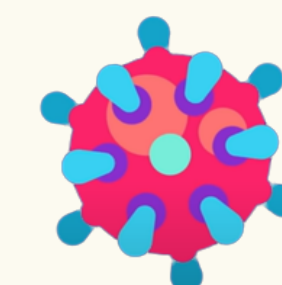- KIAN employs fact-checkers to ensure accuracy and credibility
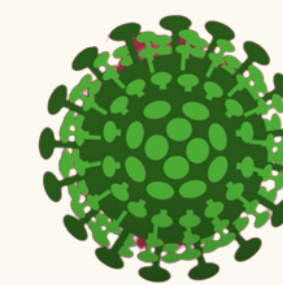
Fig.5: KIAN COVID-19 Virus Representation

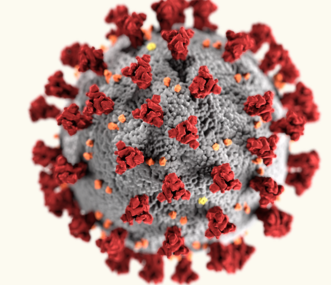*Fig.6: TIS COVID-19 Virus Representation*

Fig.7: CDC COVID-19 Virus Representation

6. Accessibility
WCAG Guidelines were used as the framework. *What videos do:*
- KIAN uses community for translation. Video has 99 languages. Inconsistent from video to video. TIS has only English.
- KIAN has channels releasing content in Spanish and German.
- Both: quality audio, no background noise, content synchronized.

7. Retention
Retention is what happens when you have content that is concise as to not overwhelm cognitive load, which is reinforced through the multimodal presentation that is equally engaging thanks to the narration and visually appealing animation. When this content can also appeal to a larger audience thanks to its accessible features and is credible, learners can truly learn.

Concluding Points

- Minimalist animated educational content is an evolving genre with the potential to further evolve into an extremely effective educational entertaining tool for practitioners to develop

- Many of the apparent shortcomings are not shortcomings of the genre but instead the restrictions and limitations of the current platform where the content exists, YouTube.

- The functional perspective of this functional framework hopes to inspire practitioners to develop more of this content for learners in the wake of the post-COVID-19 paradigm shift