# Self-learning Information Theory with audio-visual pills for social networks

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The social, economic and cultural context almost a year and a half after the World Health Organization declared COVID-19 a pandemic respiratory disease is on many levels very different. The unfolding events forced half of the world's population, 3.9 billion people, into some form of confinement. In this context of confinement, studies carried out during 2020 and 2021 point to an unprecedented increase in the use of social networks and in the number of users who use them. All highlighted TikTok as the fastest growing social network or the 'Social Network Revolution' of 2020.

The Chinese social network, formerly Musical.ly, has turned out to be the social network that has benefited the most from the social-health lock-in. Its success has led Instagram to quickly implement reels, short videos similar to those of TikTok, as well as stories and videos on IGTV, so that its number of followers does not decrease. The keys to TikTok's success are many and varied: 1) No need to have an account or register. By downloading the app, anyone can watch videos, download them, forward them, like or report them; 2) It has videos on every imaginable topic; 3) The algorithm suggests videos "For you" and has a memory: it not only offers you video themes that you have seen in the last few hours, but also in the previous weeks or months, in case you had forgotten them; 4) A video can go viral without the user who created it being an influencer or having thousands of followers; 5) The humorous and cathartic component has been fundamental, as a pastime during sanitary confinement; 6) It is a very simple network to use and does not offer navigation tutorials, promoting precisely its simplicity; 7) The videos are very short, up to one minute long, and can be viewed at any time and occasion of the day; 8) It offers simple and viral challenges, seeking the co-creation of the public, so that they can imitate them following the original idea; 9) It does not demonize plagiarism, but virality: you can make a video with the background, audio and music of another user, or you can make a duet with him/her with a shared screen; and 10) Video editing is very simple, with numerous filters, always free and completely openly available. They are on the platform itself and the user does not need any other image, video or audio editing software. No previous technical knowledge is required either.

In these new circumstances, this research delves into this new paradigm of communication to take advantage of it in the teaching and learning of university studies of Communication, studying the audiovisual pills or mini-videos in social networks and all their possibilities. The main hypothesis is that these audiovisual pills are a challenge but also an opportunity because they can

have positive effects in three areas: 1) updating and support for teachers; 2) motivation and development of a professional portfolio for students; and 3) breaking the digital divide.

Under the title *Mini-videos on social networks as creative teaching tools for equality*, the team of this Innova-Docencia UCM Project is formed by an interdisciplinary team of professors from several public and private, Spanish and foreign universities: Universidad Complutense de Madrid, Universidad Nacional de Educación a Distancia, Universidad Nebrija, Universidad Rey Juan Carlos, ESIC Business & Marketing School, Universidad Camilo José Cela, Universidade Tecnológica Federal do Paraná (Brazil) and Universidad Metropolitana del Ecuador. In addition to faculty, there are Master's and PhD students, two pre-doctoral fellows with a UCM-Banco Santander contract, administrative and service staff, and alumni.

All its members experienced the obligation to implement virtual teaching during the COVID-19 crisis. This environment made it possible to observe the growth in the use of social networks for photography and short videos, such as Instagram and TikTok, and the teaching potential of audiovisual pills. The project proposed the production of these videos, between 5 and 15 minutes long. They had to be made by the two parties involved in the classroom: 1) the teachers, as a fragment of the theoretical and practical teaching of the subject and 2) the students, as a tool for self-learning and evaluation, applying the knowledge learned in Information Theory subject applied to current examples, which had to be commented on in these audiovisual pieces.

This article focuses on the results of the qualitative questionnaires, with open-ended questions, which collected the students' opinion about the project. The sample is composed of 252 students, male (62) and female (190). All of them are undergraduate students at the Faculty of Information Sciences of the Complutense University of Madrid, aged between 20 and 25 years. The studies are Bachelor's Degree in Journalism and Bachelor's Degree in Advertising and Public Relations. The questionnaires were shared among second year students (in a compulsory subject) and third and fourth year students (in an optional subject). They answered the questionnaires at three different times, coinciding with the end of the subjects: May 2020, January 2021 and May 2021.