

Twitter as an instructional tool for critical thinking and creativity in Higher Education

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Abstract

The interest and use of Twitter (now X) as an instructional tool is perceived as an opportunity for learning processes related to critical thinking and creativity. This case study is based on the creation of a Twitter account for a course within the fourth year of the university degree in Audiovisual Communication at the Universitas Miguel Hernández (Spain).

The qualitative research, conducted over several years, validates the progression of each student year group from a passive role to a more engaged role, in which they found themselves involved in the creation of high quality audiovisual material and developed a critical concern over their own works. Furthermore, the managing of their own account on the social network contributed to improving learning outcomes in skills such as communicating complex theoretical ideas through digital tools, fostering innovative thinking and enhancing creativity.

Keywords: *Twitter; Critical thinking; Digital tools; Innovative thinking; Creativity; Qualitative analysis.*

1. Introduction

Technology and education are intricately linked, and the integration of technology in Higher Education Institutions (HEI) has been a topic of significant interest (Greenhow & Lewin, 2016). The social media platform known as Twitter –since July 2023 known as X—has gained significant attention among educators due to its potential to enhance students' development and facilitate learning since the early 2000s (García Montero et al., 2012). However, there is an ongoing debate about the effectiveness of incorporating social networks into higher education (Cheng et al., 2022; Woods et al., 2022).

The research literature suggests that Twitter had been used at High Education Institutions (HEI) for various purposes, though it has been mainly as a communication and networking tool

(Cheong-Li & Tak-Ming Wong, 2021). Twitter provides a platform for students, educators, and experts to connect and engage in discussions beyond the classroom. It allows for open and real-time communication, enabling students to reach out to professors, mentors, and peers for assistance and to pose questions in an accessible way (Abella-García et al., 2019; Cazarez Valdiviezo et al., 2016; Gallardo-López & López-Noguero, 2020)

Twitter is being used in higher education degrees as a tool for active learning and student engagement (Akella, 2014). It allows for real-time communication, diverse interaction, and sharing of experiences and opinions and to think critically (Pollalis et al., 2018). Additionally, Twitter has the potential to encourage participation, engagement, reflective thinking, and collaborative learning in different educational settings (Sulisworo et al., 2018). Furthermore, the use of Twitter in education has been found to implement specific skills such as critical literacy in the classroom (Kunnath & Jackson, 2019), or to improve critical thinking skills in general (Gao et al., 2012).

2. Critical thinking

Critical thinking plays a significant role in higher education, as it helps students develop a more analytical and reflective approach to their learning and, thus, it has been extensively used in the classrooms across different courses and subjects (Puig et al., 2019). It enables students to question and evaluate information, arguments, and ideas, leading to a deeper understanding of the subject matter. Critical thinking is an important aspect of higher education that can be fostered through various means. One way to promote critical thinking in higher education is through the use of social networks like Twitter.

In the context of the research literature, the use of Twitter in educational settings has been found to contribute to the development of critical thinking skills among undergraduate students. Interacting with classmates and people outside the class through Twitter allows students to learn from different opinions and perspectives, which enables students to develop critical attitudes towards opinions that may differ from their own, and engage in debates, further enhancing their critical thinking skills.

Furthermore, Twitter plays also a significant role in the spread of disinformation and fake news, which can have negative consequences on society. Studies have shown that people often do not critically evaluate information on social media, leading to increased trust in fake news. Educational activities that encourage students to think critically about the truthfulness of news on social media can also be effective in developing their skills in investigating the reliability of stories (Kruijt et al., 2022; Pollalis et al., 2018).

Thus, the experience of using Twitter in an educational context has been shown to contribute to the heightening of the quality of learning and the teaching-learning process itself, as stated by

the students themselves (Abella-García et al., 2019, p. 7). It is important to note, however, that while Twitter can be a valuable educational tool, the effectiveness and appropriateness may vary depending on the context, subject matter, and specific teaching strategies employed.

In light of these considerations, in 2018 we incorporated into the course ‘Cultural Mediations through the Arts’ (*Mediaciones culturales en las artes*) an activity based on Twitter to enhance critical thinking skills among students and to contribute to a more engaging and interactive learning environment.

3. Method

3.1. Description of the activity

This course, which spans over a period of fifteen weeks, is situated within the initial semester of the fourth and final year of the university program in Audiovisual Communication at the Universitas Miguel Hernández in Spain. The course’s curriculum revolves around two educational units, each encompassing various themes. These units focus on the *intricate processes of social and cultural meanings*, including the fundamental aspects of signifying practices, the exploration of social representations and cultural mediations, the examination of the sociocultural foundations of taste and aesthetics, as well as the study of cultural industries and their impact on society's fascination with spectacle. Additionally, the course delves into the *interplay between culture, politics, and society through the lens of visual arts*, offering an introduction to the world of arts and aesthetics, an exploration of the transformative power of drawings and the use of color in portraying social realities through paintings, and an analysis of how photography captures and frame social time.

Each student is anticipated to periodically publish a tweet in their personal Twitter account wherein they concisely summarize the material that was taught and deliberated upon in the lectures or assigned readings. In addition, they are required to complement their thoughts with an image. This image can either be their own creation of any format (such as a gif, videoclip, photograph, drawing, or painting) (fig. 1) or a meme derived from a distinguished work of art (fig. 2). It is imperative that the image is digitally signed by the student, adhering to the guidelines established in artº70 of the Royal Decree 24/2001, which pertains to the utilization of memes (Sp. *pastiche*). Furthermore, the tweet must include the hashtag #mediacionesculturales and mention the Twitter account of the course @umh3600. The most exemplary tweets are retweeted from this account. After the publication of the tweet, the student converts a screenshot into a Pdf file and proceeds to upload it onto the university campus website, which operates on the Moodle platform.



Figure 1. «My teacher explains Plato's cave whilst at home online, and I identify with it».



Figure 2. «We should learnt that our social networks profiles only depict a representation of ourselves, not our true selves».

In 2021 the teachers expanded the possibilities of Twitter as a tool to enhance critical thinking. Exploring the Moodle workshop module we realized that it was a powerful peer assessment activity and, hence, we decided to include a written commentary of two classmates' tweets.

The process is simple. Once the students have submitted their pdf files, these files are subsequently distributed among their peers for evaluation. The distribution process is partially anonymous. While the commentator is aware of the authors of the two tweets being analyzed as their names or usernames are displayed, the commentator's identity remains undisclosed to the author. The final grade for the assignment is determined by a combination of the posted tweet (80%) and the *crítica* (20%). This combination of both tasks, the creation of the tweet and the critique, enables the instructors to assess the students' performance, to contemplate their learning achievements and the comprehension of the course material, as well as to enhance their critical thinking abilities.

The workshop tool's interface permits the inclusion of a grading scale on designated questions at the beginning to guide peers in their assessments, as well as a mandatory open text field that serves as the most enriching component.

The students freely comment on the first two tweets, without using an itemized or bullet point scheme. However, starting from the third tweet, the teacher provides a grading scale and specifies the comments using an itemized format and a guide on how to form a critique in five paragraphs within the designated text field.

4. Results

The qualitative analysis of the tweets posted by students since 2018 consistently demonstrates their proficiency to comprehend the course materials, effectively convey intricate theoretical concepts in a fresh way, and to communicate it to the public (fig. 1 & 2 above or 3 & 4 below).



Figure 3. - *Do you have power or authority? | - Surname! | «...and who on earth gave this one the surname?»*



Figure 4. *Where does the art lie? Where it is exhibited or in the work itself? | Your home's toilet | Museum*

In addition, the qualitative analysis and discourse comparison of the open text field of the initial tweets and the final tweets, it becomes clear that the concept of critical thinking is essentially narrowed down to criticizing actions and relying solely on students' personal opinions and viewpoints. The criticisms revolve around the self with phrases like 'I believe', 'in my view' or 'I am in favour', with little attention to the tweet itself or the intended original message. However, in the final tweets the critiques are focused on the actual content of the posted tweets:

Example of a first tweet

«I don't understand the correlation between the tweet and the image, since the tweet names Wittgenstein and his work and reflects on it, but then, in the image, he puts a kind of meme where he names Antonio [the teacher] and his questions, which if it weren't for the context that I have attended to class, I wouldn't understand what the image is all about. And that's the problem, it's decontextualised.

I am in favour of the idea that if in a tweet we talk about and name x elements, the illustrative image cannot have elements that are external to it. Because rather than illustrating, it confuses. Beyond that, the question posed seems interesting to me, although I don't know to what extent the questions are going to show reality more than the words themselves, knowing that the questions are formed by the same words that delimit reality, but it opens up a very interesting debate about how reality is shaped and whether there really is a single reality that is the same for everyone».

Example of a final tweet

«This tweet tries to explain the importance of social networks in today's society of spectacle, where platforms have become the nerve centre of information and communication. The author uses a very important topic such as the use of platforms as a means of communication and how we have no guarantee that what we are being sold is a reality or not, and how the society of the spectacle is concretised in the principles of advertising, in the commercialisation of objects.

The author constructs a well-written tweet but, in spite of this, he doesn't present the idea clearly, as it is diffuse and not very coherent, because he presents an idea that is transformed throughout the tweet, which means that the reader does not fully understand what he is trying to get at with it.

However, the image he uses is quite clear in explaining this contrast between reality and what is published on social networks, this fictitious 'reality' that we create for ourselves on different platforms, to sell ourselves, turning us into a social product to fit into this society of spectacle.

In short, the question posed does not quite clarify the idea, but the execution of the image that accompanies it does reflect the intention of the idea that the author had for this tweet (as he does not quite develop it) and I encourage the author to reflect on the possible ways of writing what he does manage to represent in the image».

Independently that the commented tweets are not included in this paper for space limitations, it is clear that the discourse and structure of the critiques differ completely one from each other.

To conclude the course, in the final tweet the students are instructed to highlight those elements of the course that had the greatest influence on them. Despite being aware of their final grade, the majority of them exhibit a positive mindset towards the course. Moreover, the utmost significance for our initial intention of utilizing Twitter as a means to improve critical thinking is that they possess a keen awareness of the enhancement of their critical abilities (fig. 5 & 6).

5. Conclusions

Both this case-study and the existing body of research indicate that Twitter can have positive effects on learning outcomes and foster critical thinking. However, it is important to note that further empirical evidence is required to substantiate these assertions.

Teachers can also interpret tweets as signs of the difficulties that students face while studying. Also, since students typically incorporate instructors as characters in their memes or mention them in their texts, these tweets provide valuable feedback for educators to assess their own effectiveness in the classroom and allow a valuable opportunity to gain insight into their own performance. The tweets also provide the teacher with a repertoire of examples for use in the classroom in the successive courses. A very nice resource to modulate the dreadful consequences of the unavoidable generation gap that incessantly increases over the years.



11:19 p. m. · 12 ene. 2024 · 67 Reproducciones

Figure 5. «Everything we have learned throughout the course helps us to see the world in a clearer way and with more developed critical thinking. It's like when you take your first photograph and then learn to use the camera for real».



2:18 p. m. · 12 ene. 2024 · 45 Reproducciones

*Figure 6. «If you don't attend #mediacionesculturales how can you say you understand the world you live in if you haven't learned about signification, habitus or the society of the spectacle? How can you say you like art if you don't know what levels of interpretation are?»
| We do not know what we are getting into | Antonio teaching 'Mediaciones culturales'*

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