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VISUAL THINKING THROUGH MOVIES AND DOCUMENTARIES: ASSESSING STUDENTS' LEARNING AND SATISFACTION IN AN INTERNATIONAL RELATIONS CLASS

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ABSTRACT

In contemporary teaching, it has become quite common to talk about "active learning." This discussion initially started in Education, but it soon spread to many disciplines. International Relations (IR) is no exception to this trend, with many scholars and teachers reporting on the use of several active learning techniques in their classrooms. An active learning format that has recently gained popularity is "visual thinking" (VT). VT is considered relevant for teaching in many disciplines, including IR. Several scholars have introduced the use of visual items, such as pictures, cartoons, video games, or art paintings, in their teaching projects. Movies and documentaries are also used for visual teaching. Many IR scholars consider them as effective tools to improve students' learning, thanks to their supposed capacity to make class contents more understandable and increase student class engagement. By relying on a mixed-method approach, the goal of this study is to empirically assess whether a VT format contributes to improving IR students' hard skills, measured in terms of grades, and their perceptions about and satisfaction with the class.

Keywords: Visual thinking, international relations, movies and documentaries, active learning, mixed-method approach.

INTRODUCTION

In contemporary teaching, it is quite common to talk about "active learning". Instead of being treated as passive listeners, note-takers, and memorisers of information, a process which is unlikely to favour profound and durable knowledge (Bligh, 1998), students are encouraged to actively participate in and

reflect upon what they learn, through activities that can stimulate their "higher-order skills", such as analysis, synthesis, knowledge production, and evaluation (Anderson & Krathwohl, 2001).

The interest in active learning initially started in Education, but it soon spread to many disciplines. International Relations (IR) is no exception, with many teachers reporting on the use of several active learning techniques in their classrooms (Betti et al., 2022; Golich, 2000; Lambach et al., 2017; Powner & Allendoerfer, 2008). A teaching format that has recently gained popularity is "visual thinking" (VT), generally understood as "the use of pictorial representations" to "facilitate comprehension or enhance learners' construction of new knowledge" (Schnotz & Ainsworth, 2014, p. 2). In many disciplines, including IR, several scholars have implemented the use of pictures, cartoons, video games, art paintings, movies, or documentaries into their classrooms as tools to improve students' learning.

By relying on a mixed-method approach, this study aims to compare the performances and perceptions of a group of students with two different teaching formats, one of them based on movies and documentaries. The goal is to empirically assess whether such a format contributes to improving students' hard skills, measured in terms of grades, and their satisfaction with the class.

Our findings lead to the dual conclusion that, while a VT format based on movies and documentaries can have positive effects on expanding students' personal knowledge, its effects on students' achievement in terms of grades are less clear.

LITERATURE REVIEW

Initial theorisations on the importance of VT for teaching came from Psychology, with scholars, such as Rudolf Arnheim, defining it as "the ability to see visual shapes as images of the patterns of forces that underlie our existence – the functioning of minds, of bodies or machines, the structure of societies or ideas" (1969, p. 315). For Arnheim, by prioritising abstract thinking, Education was underestimating sensory experience and its potential to support the learning process. The visualisation and observation of objects were considered beneficial to understand complex ideas, thus making learning more interactive, creative, and engaging. The popularity of VT for teaching increased thanks to a 1999 project financed by Harvard University, called "Visual Thinking Curriculum", which defined VT as "an inquiry-based method…that aims to develop students' thinking skills by looking at and discussing art" (Tisham et al., 1999, p. 1).

In Education, among the benefits of VT for students, scholars mentioned the capacity to make complex scientific contents more understandable and easier to be communicated (Fontecha-Fernández et al., 2018), to increase engagement with the classes by making them more enjoyable (Yenawine, 2013), to enhance students' ability to think critically (Carrascal et al., 2019) and be more cooperative (Rapanta & Walton, 2016), or to improve students' motivation and performance with the assignments (Huang, 2015). In a similar way, in Math Education, some studies found an improvement in students' academic performance (Haciomeroglu & Chicken, 2012). In Computer Science, some observed an improvement in terms of memory retention and teamwork (Mones-Hattal & Mandes, 1995), while in Health disciplines, several studies reported an improvement not only in students' engagement (Choi et al., 2022) or empathy (Cerqueira et al., 2023) but also observation, evaluation, and diagnosis (Cerqueira et al., 2023; Klugman et al., 2011; Moorman et al., 2017; Nanavaty, 2017; Poirier et al., 2020).

In some of these disciplines, teachers implemented VT through movies. For example, in Education, some studies found that movies can enhance the learning of foreign languages by exposing students to native accents and more authentic conversations (Al Murshidi, 2020). In Medicine, some have observed that movies can inspire students' emotional side and improve their capacity to understand complex problems related to medical practices, especially psychological ones. This can improve their relationships with patients. (Kadivar et al., 2018). However, some also warned that it might not be easy to balance the affective and cognitive aspects of learning in a way that ensures emotions lead to deep reflection, rather than just contingent reactions (Blasco et al., 2015).

In some Social Science disciplines, such as History, it has been quite common to use visual materials (Rose, 2016), including movies. Some reported that films can grant students the capacity to express positions on controversial historical issues, such as race or human rights violations (Stoddard et al., 2017). Nevertheless, films are not always accurate in terms of the historical information they deliver, which can hinder students' capacity to distinguish facts from interpretations (Stoddard, 2012). Other historians stressed the capacity of films to improve students' understanding, analysis, and critical thinking. However, they have also reported that their use in class might not be simple, especially when teachers lack adequate skills to analyse visual media, which reduces their capacity to teach students how to critically engage with movies (Wagner, 2018).

Unlike History, Political Science, and IR have traditionally assigned less importance to visuality. Some have spoken of a "squeamishness" of these disciplines towards visual materials. This would be related to a certain reluctance of these disciplines "towards the affective and emotional dynamics of politics." This would generate an academic discussion that does not fully consider the "feelings and affects that underpin political debates", with a consequent underestimation of the "affective dynamics of political life." By privileging "thought over emotions" and by implying that "emotions cloud reasoning capacities", the disciplines of PS and IR tend to show a "weariness of digging into the feeling and affective dynamics that underpin everyday forms of political participation and engagement" (Dean, 2019, p. 257).

In IR, several scholars have, thus, argued about the necessity of a "visual" turn (Bleiker, 2018; James, 2019). This has led to a more pluralist methodological approach, which proposes using visuality to understand the impact of images on international politics (Callahan, 2020).

Such a turn has contributed to making VT increasingly more palatable also for IR teaching. For example, a recent study found that the use of image-rich slides in lectures can increase students' engagement. This would be especially true in comparison with text-heavy slides that tend to augment the cognitive overload and make it more difficult to follow the class, as students must constantly choose between listening to the teacher or reading the slides. Nevertheless, the study also found that images must be selected with care, as some students can find them ethically and politically controversial. An overreliance on images can reduce students' abilities to read and critically analyse information presented in text form, as images alone may not be sufficient to transmit complex ideas and data. This requires a balance between images and text, avoiding an oversimplification of complex concepts (Roberts, 2017).

In addition to images, special attention has been given to inquiring into the relevance of popular culture items, for example, movies. A large literature has relied on movies to research a wide range of issues in the study of IR (Buzan, 2010; Campbell, 2022; Daniel & Musgrave, 2017; Carter & Dodds, 2014; Shapiro, 2009; Weber, 2006). Similar attention has been recently dedicated to documentaries (Van

Munster & Sylvest, 2015) and docudramas (Heck, 2017). Along these lines, movies and documentaries have acquired relevance also for IR teaching.

Several IR scholars have reported that movies can increase students' understanding and retention of key concepts (Sunderland et al., 2008). This would be related to the capacity to "make abstract theories and concepts more understandable" (Gokcek & Howard, 2013, p. 441; Kiasatpour, 1999) and more "real…in a fun and entertaining way" (Kuzma & Haney, 2001, p. 47). Moreover, movies can improve their creative thinking (Kuzma & Haney, 2001; Valeriano, 2013; Weber, 2001), engagement (Gokcek & Howard, 2013; Iretzberger, 2021), and analytical skills (Lieberfeld, 2007). Finally, they can challenge students' prejudices, with positive effects in terms of critical thinking (Iretzberger, 2021) and the capacity to establish connections between different historical epochs (Gokcek & Howard, 2013).

Nevertheless, some have also identified possible drawbacks of using movies in class, such as the risk of providing oversimplified representations of reality, leaving students with the impression that "the history portrayed in the movie is the only accurate account" (Kuzma & Haney, 2002, p. 93). Depending on where they are produced and by whom, movies can also suffer from ethnocentric biases that end up stereotyping different cultures (Giglio, 2002). Some studies discovered that films increase students' capacity to understand complex and real-world processes, such as decision-making, even though they do not necessarily improve students' "understanding of the theoretical concepts and how they could be applied" (Inoue & Krain, 2014, p. 20).

For others, movies can also produce the sensation of a bigger workload, especially when class assignments require them to meet outside class to watch and discuss the movies (Kiasatpour, 1999, p. 85). In addition, students may not necessarily enjoy, but also be confused by movies, for example, when they cannot discern "real experience" from "fictional" and "deliberately misleading" representations (Lieberfeld, 2007, p. 573).

From the point of view of teachers, selecting movies that accurately represent political events can be particularly challenging, requiring expertise and extra work that may not always be available (Sunderland et al., 2008). Some also highlighted the challenge to adapt the duration of movies to class times (Iretzberger, 2021).

Finally, a quantitative study based on surveys similarly detected both positive and negative results, thus encouraging the considered use of movies in class. On the one hand, students can feel more interested and engaged with the class, increase their understanding of complex concepts, develop their capacity for interpretation and critical examination, and even obtain better grades. On the other hand, films can sometimes treat issues in a superficial and sensationalised way, generating confusion and a feeling of not being able to relate film narratives with academic concepts. Finally, while some movies can "engage and bring students into closer contact with the issue", others "could potentially drive them away if the film is boring or overly depressing" (Swimelar, 2013, p. 24). In one of the few studies that compared films with other teaching techniques, games were found to be more effective than movies in upgrading students' grades and satisfaction (Brandle, 2020).

As can be observed, while subjects such as Education, Medicine, or Computer Science have generally been welcoming about using VT for teaching, including through movies and documentaries, in Social Science, there appears to be less consensus on the utility of this format. Unlike History, in which the use of movies and documentaries for teaching is more established, a larger debate can be found in PS and IR.

The following table (Table 1) summarises the results of our literature review, providing a comparison of the results obtained in different implementations of VT strategies across various academic subjects.

Table 1

Results of VT Implementations in Terms of Students' Academic Performance in Different Academic Subjects

Discipline	91mpacto n learning
Foreign language learning	- Enhance learning (Al Murshidi, 2020)
Health disciplines	- Improve students' relationships with patients (Kadivar et al., 2018) - Improve observation, evaluation and diagnosis skills (Klugman et al., 2011; Moorman et al., 2017; Nanavaty, 2017; Poirer et al., 2020) -Improve engagement (Choi et al., 2022). -Improve observational skills, empathy, and tolerance to ambiguity (Cerqueira et al., 2023).
History	- Enhance students' capacity to express opinions (Stoddard et al., 2017) - But hinder the ability to distinguish facts from interpretations (Stoddard et al., 2012)
International Relations and Political Science	-Not necessarily favouring students' engagement (Swimelar, 2013) -Risks of misleading representations (Lieberfeld, 2007) -Sensation of bigger workload (Kiasatpour, 1999) -Risk of creating new stereotypes (Giglio, 2002) -Do not necessarily improve understanding of complex concepts (Inoue & Krain, 2014) -Risk of historical inaccuracy (Kuzma & Haney, 2002) - Useful to establish connections among different historical epochs (Gokcek & Howard, 2013) -Can be good for critical thinking (Iretzberger, 2021) -Can improve students' analytical skills (Lieberfeld, 2007) -Can make students more engaged (Gokcek & Howard, 2013; Iretzberger, 2021) -Improve students' creative thinking (Kuzma & Haney, 2001; Valeriano, 2013; Weber, 2001) -Can make learning more fun (Kuzma & Haney, 2001) -Can make abstract concepts more understandable (Gokcek & Howard, 2013; Kiasatpour, 1999) -Games are more effective than movies in upgrading students' grades and satisfaction (Brandle, 2020) - Improve students' understanding and retention of key concepts (Sunderland et al., 2008)
Nursing	- Improve engagement in online teaching (Choi et al., 2022)
Medicine	- Improve observational skills, empathy, and tolerance to ambiguity (Cerqueira, 2023)
Business & Education	- Improve cooperative skills (Rapanta & Walton, 2016)
Maths (Calculus)	- Improve problem solving (Huang, 2015) - Improve mathematical (derivative-related) performance (Haciomeroglu & Chicken, 2012).

MATERIALS AND METHODS

When comparing the effectiveness of different teaching formats to understand their impact on students' learning, one of the challenges is designing the experiment. Probably due to its relatively recent origin, the empirical literature on teaching through VT does not seem to thoroughly deal with this issue. Only a few studies are based on experimental designs, in which students' performances with VT formats are compared with their performances with other teaching formats. The majority are either descriptions of teaching implementations or empirical analyses of students' performances with solely VT formats. This study employs an experimental design, comparing a teaching format based on VT with one not based on VT.

An additional problem is what teaching formats to compare. Comparing formats that present differences too large to be compared, for example, a fully traditional with an active learning format, risks producing inadequate results. Considering the widespread criticism against traditional teaching and the increasingly frequent implementation of active learning strategies, comparing fully traditional with active learning formats can make traditional teaching a straw man, leading to the unsatisfactory conclusion that active is better than traditional. For this reason, several scholars proposed to compare active learning formats with "a control model that uses active learning" (Betti et al., 2020; Jensen et al., 2015, p. 11; Lai & Hwang, 2016). Comparing different active learning formats is likely to be more helpful to "parse out the effects" of such formats on students' learning (Jensen et al., 2015, p. 2). Devising experiments based on more comparable formats provide harder tests than experiments merely based on comparisons between active and traditional formats.

Finally, several scholars have attempted to find strategies for selecting groups in a way that can reduce biased effects. In the active learning literature, many studies tend to compare students' performance with and perceptions about teaching formats, by using different groups of students. For example, an experimental group is taught through an active learning format, while a different control group is taught through another, or similar, active learning format (Idsardi et al., 2023; Shen & Chang, 2023). This can generate confounding factors based on the students' two different perceptions. One group could feel more disrupted than the other about the teaching innovation. To reduce the risk of biased comparisons among different groups of people, several scholars suggested studying the effects of different teaching formats on single groups of students, for example by comparing two different sections of the same course taught through two different formats (Cobb, 2016; Khodaei et al., 2022; Wut et al., 2022).

In this vein, our study compares the performance of the same group of students with two different sections of the same class, taught with two different and comparable formats.

Our goal is to discover whether using a VT format based on movies and documentaries can improve students' hard skills, understood as academic achievement measured in terms of grades, and their satisfaction with the class.

Participants were 62 students of a second-year mandatory core class, called Comparative Political Systems, which is part of a Dual-Degree Program in International Relations (IR) and Global Communication (GC). We were able to collect all the data for 42 students (see Table 2).

Table 2

The Sample

	Number of students
Students enrolled	62
Sample	42 (68%)

The experiment was conducted in two sections of the class. The first section lasted 7 weeks and was taught through a format based on a combination of traditional face-to-face lectures and active learning strategies. Two hours per week consisted of face-to-face lecturing, while the other two hours were used to perform active learning activities in class, such as debates, presentations, and teamwork tasks. The contents explained through front-facing lectures included political parties, electoral laws, and the characteristics of different political systems.

The second section of the class also lasted 7 weeks, but it was taught through a different format. All four hours per week were entirely based on visual activities, such as watching movies and documentaries. Students watched two Netflix documentaries in class: one about democracy and the other about dictatorship. After each chapter of the documentaries, the professor organised some class debates. This way, students could discuss the main themes of the documentaries with the professor and among themselves, and solve doubts about the concepts related to the section's content, specifically, the political and institutional differences between democracy and dictatorship.

Students were required to produce short papers and class presentations based on the contents learned through frontal lectures in the first section, and based on the contents learned through documentaries in the second section. While they had previous experience with the format used in the first section of the class, students did not have any experience with the format of the second section. The professor had experience with both formats.

Additionally, for the first section of the class, students were required to work in groups and prepare a 2500-word essay on the contents explained through frontal lectures. After submitting the paper, each group was required to share its analysis with the rest of the class through a 20-minute class presentation related to the contents explained through frontal lectures in the first section. A calendar of presentations was created with this goal.

For the second section of the class, 24 movies were selected, 12 about democracy and 12 about dictatorship. Students had to select movies based on the groups they naturally formed. Each group was composed of 5 or 6 members and was required to watch one movie outside of class about democracy and one about dictatorship. Each group received two documents with two different schemes for analysis, one about democracy and the other about dictatorship, produced by the professor. These schemes contained some basic questions to orient their analyses of how democracy and dictatorship were represented in the selected movies. Groups were then required to write a 2500-word essay on each of the two selected movies. The essay had to contain an examination of the two movies based on the schemes for analysis. Finally, groups were required to share their analyses with the rest of the class through a 20-minute presentation related to the contents of the second section and to the movies they watched. A second calendar of presentations was created with this goal.

The experiment received the authorisation of the Teaching Innovation Evaluation Committee of the University where it took place. The Committee, which responds to the Teaching Innovation Unit, acting under the authority of the Vice-Chancellor of the University, approved the ethical aspects of the study, along with its research goals. Thus, it granted funds for the project "Implementation and assessment of Visual Thinking strategies in the Dual Degree in International Relations and Global Communications", for the academic period 2021-2023. Students agreed to participate in the experiment by filling in and signing a form. During the process, they received full information about the research goals. Their personal data was not shared with any person or institution. Their participation was completely voluntary.

To measure students' learning in terms of hard skills, the researchers collected data from their performances, both prior to and during the experiment, with the goal of comparing them. Regarding their performance prior to the experiment, we collected the grades[1] that students had achieved until that moment in the Degree in IR and in the Degree GC (Table 3), that is, the average of the grades obtained in each Degree one year before they took the class "Comparative Political Systems", and before the experiment was conducted.

Table 3

Description of the Average Grades in the Degrees in IR and in GC

	Minimum	Maximum	Mean	Standard Deviation
Degree in IR	7.13	9.24	8.322	0.574
Degree in GC	7.36	9.36	8.437	0.520
TOTAL = 42 students				

Regarding their performance during the experiment, we collected the grades that students obtained in two moments, the first at the end of the first section (EXNVT), based on frontal lecturing and other active learning techniques, and the second at the end of the second section, based on visual materials (EXVT). The researchers then evaluated students' knowledge of the content developed in each section. Finally, researchers collected the grades (EXFINAL) that students achieved at the end of the class through a final exam, which evaluated their knowledge of the contents from both teaching formats (Table 4).

Table 4

Results Obtained in the Two Teaching Formats and in the Final Exam

	Minimum	Maximum	Mean	Standard Deviation
EXNVT	5.0	10	7.964	1.685
EXVT	5.0	9.50	7.280	1,300
EXFINAL	6.47	10	8.478	1.039
TOTAL = 42 students				

[1] Data range from 0.00, being the lowest grade, to 10.00, being the highest grade. The minimum grade to pass an exam is 5.00.

To analyse students' perceptions of the formats, this research conducted one focus group. Considering the relative novelty of VT as an active learning technique that aims to improve students' learning, focus groups can be valuable in giving voice to the main receivers of such a teaching innovation. Focus groups can expand our knowledge of the meanings that students assign to the implemented formats (Barbour, 2007).

This research initially tried to follow a "purposive sampling criterion." This means that students were not selected on a random basis, but by ensuring "a good deal of variety in the resulting sample" (Bryman, 2012, p. 418). We, thus, selected students who performed differently in terms of grades in their previous classes to obtain a wider range of opinions. The goal was to have between 8 and 10 students. Unfortunately, only four were accepted to contribute, possibly due to the impossibility of granting them extra credit for their participation. Therefore, researchers had to rely on a "convenience sampling" (Miles & Huberman, 2017, Chapter 2), which is based on the students' willingness and availability to participate. All 4 participants were women. Although the gender distribution was not optimal, gender was never considered a relevant variable to analyse students' perceptions about active learning strategies in the studies that researchers reviewed before undertaking this study.

RESULTS

Our first goal was to assess whether the use of a VT format based on movies and documentaries can lead to better academic results. Thus, the null hypothesis (H_0) was that a VT format administered to the same group of students does not have a significant effect on students' academic results. With this aim, the researchers compared the results obtained in the second section of the class, based on visual materials, with the average results that students had obtained until then in the Degree in IR and in the Degree in GC, and with the results obtained in the first section of the class, not based on visual materials.

When the two series to be compared were normal, the researchers performed a parametric test (T-test). When at least one of the two series was not normal, the researchers performed a non-parametric test (Wilcoxon test). The grades of the Degree in IR, the grades in the Degree in GC, and the grades in the section based on visual materials (EXVT) were normal series. The other two series, the grades of the final exam (EXFINAL) and the grades of the section not based on visual materials (EXNVT), were not normal. Table 4 shows these results.

Table 5

Results of the T Test and Wilcoxon Test

	p - value	Sign of change
IR - GC	<0,001**	positive
IR - EXVT	<0,001**	negative
GC - EXVT	<0,001**	negative
EXNVT - EXFINAL	0,014*	positive
EXNVT - EXVT	0,022*	negative
IR - EXNVT	0,285	
GC - EXNVT	0,154	
EXVT - EXFINAL	<0,001**	positive
IR - EXFINAL	0,05*	positive
GC - EXFINAL	0,297	

As can be observed, administering the class in the VT format (EXVT) negatively affected students' grades, as compared with those that students had obtained in the previous classes of both Degrees and with those obtained in the first section of the class (EXNVT), not based on the VT format. At the same time, the grades obtained in the final exam (EXFINAL) improved, as compared not only with the grades obtained in the Degree in IR, that is the Degree that is most related with the class of the experiment, but also with the grades obtained in the first section (EXNVT), not based on the VT format, and with the grades obtained in the second section (EXVT), based on the VT format.

This means that, after evaluating their performance throughout all class, their aggregated results were significantly better. A possible explanation is that a better academic performance was not necessarily linked to one format or the other, but rather the result of a combination of different teaching formats and techniques.

The second goal of this research was to explore students' perceptions and satisfaction with the VT format based on movies and documentaries. To analyse the content of the focus group, we performed a three-cycle process of codification (Miles & Huberman, 2017, Chapter 4). In the first cycle, we relied on several initial coding techniques, such as "process", "In Vivo", and "descriptive" coding (Saldaña, 2012, pp. 87-99), to generate codes that classified the units of analysis. In the second cycle, we used a "holistic" coding technique to organise the codes created in the first cycle into thematic areas (Saldaña, 2012, pp. 142-4). Finally, in the third cycle, we used a "focused" coding technique that identified the most prominent codes in each thematic area based on their frequency and significance, with the goal of developing "the most salient categories in the data corpus" and finding patterns (Saldaña, 2012, p. 213).

Students initially discussed their perceptions about the impact of the VT format on their academic performance. There was a consensus that this format was helpful to understand complex issues, such as the institutional, political, and historical differences between democracies and autocracies (11 times).

I now feel much safer and more confident to speak about a democracy, an autocracy, to give examples, and even compare contemporary political systems, for example, with people that I meet in my daily life (E).[2]

Movies and documentaries helped students establish connections between the contents of the class and people's real-life stories, with a positive effect on understanding facts and concepts (4 times).

I believe that, through examples and stories that can capture our attention, it is much easier to understand (P).

A personal story definitely gives you a much more real image of a society, rather than simply hearing that in that society there is a dictatorship…you understand a lot better the context in which people live (D).

[2] To guarantee participants' anonymity, their statements are followed by the initial of their first name.

Students also considered the format beneficial to stimulate a "more autonomous work" (7 times), that is, the interest and motivation to seek more information about a person or an issue after watching a movie or a documentary. This had further positive effects on "content retention" (5 times).

Nevertheless, students also affirmed that they did not feel that movies and documentaries had a direct impact on their grades (4 times). Stories and people represented in a movie or documentary transmitted a sensation of augmenting knowledge of specific matters, actors, or contexts, but not necessarily one of improving grades (3 times).

It is not very clear to me that this positively or negatively influenced my grade. I hope it did have a positive impact, as my results were good, but I don't know for sure (E).

I don't think my grade reflects what I really learned (E1).

I cannot say this influenced my grade (D).

I don't think it has influenced my grade, either positively or negatively (P).

Students perceived movies and documentaries as artistic productions with scripts that are created to represent people and their stories, but not necessarily as instruments to clarify the contents of a class (6 times).

[Speaking about the movie *Citizen Kane*] We did not feel that [class contents] fit well with that movie (D).

I thought it was difficult to extract [from movies or documentaries] general conclusions about democracy and dictatorship (P).

You can't apply [what a movie shows you] to other places (D).

One of the weaknesses…the difficulty to make generalisations (P).

Movies and documentaries were deemed beneficial to improve their capacity for autonomous and personal "reflection" (12 times).

Since we had to look for so much information to do the activities [referring to the essay and the presentation assigned on the basis of the movies and documentaries], it was possible to compare, and I felt I was learning, but not in the traditional way, as in the other sections [of the class] (E).

This was perceived as positively affecting "motivation and interest" (10 times).

Through the documentaries on democracy and dictatorship, what I felt was motivation…I thought it was a much more original way to learn without depending on a PowerPoint, something different from what we have been doing for so long…I thought it was motivating (P).

All this increased their "sensation of learning" (10 times), their interest in "deepening knowledge" (8 times), and their capacity to maintain "attention in class" (10 times).

Nevertheless, after making comparisons with teaching formats that they felt more familiar with, such as traditional ones based on frontal teaching or the one implemented in the first section of the class, based on a combination of traditional frontal teaching and active learning techniques, students agreed that a VT format should not be considered a substitute for such formats.

On the one hand, students indicated that the novelty of the VT format could at times produce a "sensation of being lost and confused" (2 times), thus recommending that teaching innovations, such as using movies and documentaries, be implemented with care, possibly "at the beginning of a class" (10 times), and not in one of its following sections, as in our experiment. This would provide them with "more time" (7 times) to become accustomed to it. On the other hand, the fact that the VT format could be beneficial for learning did not make it necessarily better than other teaching formats. Their preference was for a format capable of integrating different teaching methods (6 times). These included frontal lecturing, based on the professor's explanations of text-rich materials, for example, PowerPoint presentations, evaluation activities based on active learning techniques, and the use of movies and documentaries.

This result can be attributed to the fact that the experiment took place in a university context where teaching is delivered mostly through traditional formats. Frontal lecturing, although combined with active learning techniques, is the usual style of teaching. In that sense, the students that we interviewed likely missed a larger presence of traditional lectures, where the professor explains the contents by following an established and structured presentation. According to their preferences, the optimal format would be frontal lecturing combined with the use of movies, documentaries, and images, which can help create a sense of closeness to the object of study.

What I would change would be to gradually implement [VT] by combining it with PowerPoint presentations (E1).

Apart from implementing VT, I would look for ways to innovate the evaluation system to better motivate students, so that not all is limited to a grade in an exam (E1).

What is particularly important to observe is that, at any time, the VT format was perceived as a complement rather than a replacement of traditional or semi-traditional teaching (4 times).

I can see negative aspects [of VT], that is, that sometimes you feel like you have no teaching support. But I also see the positive aspects, such as that it makes you more independent and capable of thinking more deeply. I think I would look for an intermediate [format] (E1).

I see it more as a way to complement, say a PowerPoint, rather than substitute it (P).

Two students also referred to the continuing centrality of the professor as the fundamental figure to make any kind of teaching format work.

Yes…autonomy is a virtue. However, I also think the presence of a professor is necessary…to open debates, explore more deeply because sometimes we don't have the sufficient knowledge to get where we want or to understand more specific aspects. So, I think [VT] is very interesting and it can help, but the professor is also necessary (P).

For example, had I watched the Netflix documentaries without [the professor] asking questions, I don't think I would have taken away the same things (D).

DISCUSSION

Students were generally positive about using movies and documentaries as teaching tools. Similarly to previous studies on PS and IR classes, they frequently mentioned the capacity of such visual materials to make information on key concepts (Sunderland et al., 2008) easier to understand and retain. Thanks to their capacity to provide knowledge of specific contexts, people, and real-life situations, movies and documentaries are perceived as useful instruments to grasp abstract and complex notions. Students deemed this beneficial to improving their analytical skills, especially in terms of developing the ability to deepen their knowledge through more autonomous work (Lieberfeld, 2007).

Nevertheless, students also suggested implementing VT gradually, so that students not accustomed to it could better adapt to its novelties. Previous studies highlighted a similar point when discussing the challenges that adapting movies to class schedules can mean (Iretzberger, 2021). Even though students in our experiment did not relate the VT format with a bigger workload (Kiasatpour, 1999, p. 85), they referred to a sensation of being, at times, lost, especially in terms of understanding the requirements of the class activities based on movies and documentaries. Surprisingly, in our qualitative study, there was only one brief reference to the fact that the VT format contributed to making teaching and learning more fun, an expectation that can be found in several studies across various disciplines (Kuzma & Haney, 2001, p. 47; Yenawine, 2013). Instead, our results were more in line with a PS study that detected that students did not necessarily find the assignments related with visual materials more enjoyable, as they required more logistical organization with their classmates, for example in terms of finding the time to discuss and analyze movies (Kiasatpour, 1999, p. 85).

Similarly to previous PS and IR qualitative studies, our students did not deny that a VT format can be valuable for important skills related to learning, such as motivation, engagement, and attention (Gokcek & Howard, 2013, p. 441; Iretzberger, 2021). Nevertheless, their perception of the impact of the VT format on their academic achievement was less clear. This is in line with other PS studies that showed that, on the one hand, movies can improve students' capacity to understand complex and real-world issues, like political decision-making. On the other hand, this does not necessarily translate into a capacity to understand how academic and theoretical concepts should be used and applied (Inoue and Krain, 2014: 20). While they can improve interest, engagement, and capacity of critical examination, movies and documentaries can sometimes also handle complex issues in a simplified way, generating the sensation of not being able to see a clear relation between visual narratives and academic contents (Swimelar, 2013, p. 24).

In our experiment, students found it difficult to detect patterns or generalisations through movies and documentaries. It was especially hard for them to connect visual narratives with academic contents. In the focus group, students pointed out that, while they can stimulate their interest and engagement with the class, increase their understanding of complex situations and concepts, or develop their critical thinking skills, visual narratives might also treat political issues superficially, generating confusion and inability to translate fictional contents into academic and technical knowledge (Swimelar, 2013).

The difficulty to connect visual narratives with academic contents was one of the reasons why students in this experiment did not feel that the VT format had a direct or positive impact on their grades.

Differently from other studies that found a positive effect of visual materials on students' performance in assignments (Huang, 2015), our analysis did not detect such an impact on students' grades. In terms of movies and documentaries, as both our students and some previous studies highlighted, they do not always help distinguish facts from "fictional" and "deliberately misleading" representations (Lieberfeld, 2007, p. 573). This makes their contribution to student achievement less linear. Along these lines, our quantitative study even detected a decline in students' grades in the VT format.

The difficulty to move from fiction to facts and academic concepts might reveal another potential downside of VT formats. Even though it was not designed around movies and documentaries, a previous IR study on the implementation of a VT format based on images warned against an overreliance on visual materials. While they can be useful to make concepts more evident and understandable, such materials could also have a detrimental effect on students' capacity to read and grasp information presented in text form. This requires a balanced approach, capable of combining visual and written materials, as an underestimation of the latter could lead to the oversimplification of complex issues, reducing the possibility of transmitting complex ideas (Roberts, 2017). Some IR scholars made a similar point about movies (Kuzma & Haney, 2002, p. 93). While the stories told in a movie or documentary improve the sensation of learning thanks to an expansion of personal knowledge, this may not always convert into an academic improvement. Some historians have been even more skeptical on this point, when signaling that the inaccuracies of film narratives can hinder students' capacity to distinguish facts from interpretations, as visual materials alone cannot convey the details of technical issues. This could even harm students' ability to understand and analyze complex information presented in text form (Stoddard, 2012), for example, in lengthy manuals or archival documents.

Despite this, the results of our mixed-method analysis are not meant to refute the importance of "visual language" in the study of PS and IR (Callahan, 2020). Such results should rather be interpreted as a caveat to implement VT strategies in a cautious way. Without denying the motivating effects of these materials on learning, students are also likely to find it difficult to extract from movies and documentaries ideas, conclusions, or instruments to interpret political issues and actors. The effort that is often necessary to follow and contextualise a movie script can reduce both students' achievement and perception of learning.

This is possibly why the students in our study expressed a preference for "having mixed class sessions" (Jenkins, 2015, p. 610), in which VT and other active learning strategies are used as complements rather than substitutes for other traditional or semi-traditional teaching formats. Hence, their suggestion is to design classes based on an integration of different teaching formats, both traditional and innovative, rather than on a particular one. Such a preference was somehow reflected in their grades. Despite a worsening in the VT section of the class, student achievement improved after being taught in all the different formats in which we designed our class, and after considering all the assignments, including the ones from the first semi-traditional section and the final exam. In this respect, students noticeably signaled the importance of the professor for the success or failure of any teaching format.

Finding an effective balance between textual, visual, or even sound materials, without oversimplifying academic contents, seems to be one of the main challenges in the implementation of innovative teaching formats. A recent study on the use of artwork for teaching, based on interviews with teachers, for example, found a consensus that visual methodologies should be integrated as "complementary and synergistic strategies", designed to develop students' thinking skills, but not as substitutes for traditional teaching (Chin, 2017, p. 61).

Far from suggesting not to use movies, documentaries, or other VT materials in the classroom, our study comes to the tentative conclusion that active learning should be seen as an "attitude towards teaching." This means that it cannot be "defined only by the techniques used, but by the way we approach teaching and learning and how we involve the students in our courses." Students in our study emphasised the importance of a "dialogical way of teaching", in which they are not simply administered teaching techniques, but are also assisted by competent instructors through discussions, debates, and reflections. More than a specific teaching format, this is possibly "what makes a difference in the students' learning process" (Inoue & Krain, 2014, p. 432). As in the case of movies and documentaries, no teaching technique should be seen as a "silver bullet or a guaranteed successful pedagogical tool" (Swimelar, 2013, p. 24).

CONCLUSIONS

The main limitation of this study was its reduced sample size and the limited duration of the experiment, which was confined to a single class. Moreover, the focus group comprised of only four participants, all of whom were women. Having only women in the focus group was not a result of our choice, but rather a consequence of how students responded to our invitations to participate. While the researchers invited a sample composed of both men and women, only women accepted. Although previous experiments that analysed students' perceptions about active learning strategies do not usually consider gender as a relevant variable, the researchers were aware that a more diverse group can provide more varied perspectives on the use of visual materials in academic teaching.

Our research design, based on the exposition to a VT format of a single group of students, promises to reduce the impact of possible biases and confounding factors. Nevertheless, limiting the experiment to two sections of a single class throughout a single semester lowers the possibility of generalisation. It is, thus, our goal to repeat the experiment with a larger sample, more balanced in terms of gender, and over a longer time span. Moreover, this study is meant to be part of a cycle of empirical analyses aimed at shedding light on the possible benefits and drawbacks of learning through VT.

For example, the researchers aim to conduct more experiments to give substance to our tentative dual conclusion. On the one hand, movies and documentaries can be useful to expand students' personal knowledge and capacity for reflection. On the other hand, they may not be as useful as teaching instruments to improve their academic performance. While some IR, PS, and History scholars have come to similar conclusions (Kuzma & Haney, 2002; Stoddard, 2012; Swimelar, 2013), more data and analysis are required on this point. It is our intention to conduct a new experiment based on empirical strategies capable of measuring the impact of VT on students' soft skills, such as self-efficacy, attention, critical thinking, teamwork, or learning perception.

Behind students' suggestions to integrate different formats in the same classes, there is a reasonable desire to be exposed to more stimulating and motivating teaching, especially in comparison with fully traditional formats merely based on frontal lectures. Nevertheless, it could also be difficult to maintain attention and concentration during classes designed to transmit difficult concepts that are not always amenable to being taught through entertaining materials. A study on the impact of VT formats on students' soft skills could help reveal if combining different teaching strategies is more likely to favour or hinder their capacity to remain deeply focused on complex topics for several weeks. Moreover, it would be useful to understand whether such formats can help align students' achievement with their learning perceptions or if the two dimensions are somehow independent.

In this respect, and in line with the main findings of this paper, it is necessary to further investigate how to more effectively combine traditional teaching formats, based on frontal lecturing, with other active learning techniques, such as VT strategies, but also flipped classrooms (Betti et al., 2022), simulations (Sunderland et al., 2009), or games (Murillo-Zamorano et al., 2021). This would not only provide more data on students' preferences in terms of teaching formats, but also on what teaching formats are more likely to improve their personal and academic performance. Finally, in terms of VT, it would provide more data on what aspects of movies and documentaries are more useful for their learning outcomes and how some of the main drawbacks of using these materials, such as the difficulty in relating fictional narratives to academic contents, can be mitigated.

Finally, in line with some previous studies, it is necessary to understand teachers' viewpoints on these types of formats (Chin, 2017). While it is correct that teaching is increasingly a more "student-centered" activity, we should not forget that, for a format to be successful, it requires a bilateral process, in which both students and instructors actively contribute and feel part of the same process.

To better understand both students' and teachers' viewpoints on the effectiveness of teaching formats based on active learning strategies, such as movies and documentaries, it is also relevant to conduct in-depth individual interviews. Individual interviews, "conducted in a discursive dialogue form", can provide "a high response rate" and "a much better quality of information" (Brinkmann & Kvale, 2018; Yeung, 1995, p. 329). For this reason, it is our goal to improve our future experiments not only with larger focus groups but also with in-depth interviews.

Keeping its limitations in mind, this study should be viewed as an exploratory analysis of a fundamental issue in contemporary education, that is how to improve teaching and what strategies are more likely to achieve this goal. In this vein, the researchers think it adds relevant data to enrich and continue an important scholarly debate.

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