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Methodological evaluation based on a systematic review of the literature on the use of film in the classroom

Evaluación metodológica basada en una revisión sistemática de la literatura en el uso del cine dentro del aula

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Abstract

The use of cinema in the classroom is a resource widely used by teachers, even if it lacks systematisation, which presupposes the development of methods that allow it to be not only a didactic tool, but a pedagogical methodology. The orientation of studies in this direction aims to promote the expansion of this use of cinema, since providing a formal structure for this practise can encourage other teachers to incorporate it into their subjects. Assessing the maturity and formalisation of research on the use of cinema in the classroom therefore allows us to identify the characteristics of the research developed and understand its limitations in order to lay the foundations for the introduction of film-based learning (ABC) as a methodology. didactics. To this end, a systematic literature review (SLR) will be carried out using the PRISMA model, based on the recovery of literature published between 2010 and 2021 in the Scopus, Web of Science and Google Scholar databases using the Publish or Perish software. After a clustering and analysis of the 75 selected references, it is found that the maturity of this research area and the methodological formalisation are very low. Therefore, a validation of the ABC methodology through expert judgement is proposed in order to extend and systematise the application of this approach.

Keywords

Systematic Literature Review; Metaanalysis; Research Methods; Cinema; Education; Methodology; Film-Based Learning.

Resumen

La utilización del cine dentro del aula es un recurso ampliamente empleado por el profesorado, aunque su extensión está carente de sistematización, lo que condiciona el desarrollo de metodologías que le permitan ser, no solo un recurso didáctico, sino una metodología educativa. Dirigir los estudios en esta dirección pretende favorecer la extensión de este uso del cine, ya que dotar de una estructura formal a esta práctica puede favorecer que otros docentes la incorporen en sus asignaturas. Por ello, evaluar el nivel de madurez y formalización de las investigaciones sobre el uso del cine en el aula permite identificar las características de las investigaciones desarrolladas y comprender sus limitaciones, sentando las bases para establecer el Aprendizaje Basado en el Cine (ABC) como metodología didáctica. Para ello, se realiza una Revisión Sistemática de la Literatura (SLR), aplicando el modelo PRISMA, a partir de la recuperación de literatura realizada en las bases de datos Scopus, Web of Science y Google Scholar entre 2010 y 2021, empleando el software Publish or Perish. Tras un proceso de clusterización y análisis de las 75 referencias seleccionadas se concluye que el nivel de madurez de esta área de investigación y la formalización metodológica son muy bajas, por lo que se propone una validación por juicio de expertos de la metodología ABC con el fin de ampliar y sistematizar la aplicación de este enfoque.

Palabras clave

Revisión sistemática de la literatura; metaanálisis; métodos de investigación; cine; educación; metodología; aprendizaje basado en el cine.

Introduction

The use of films in teaching is not a new proposal; there are a variety of experiences that involve its introduction in different areas of knowledge. In most of these cases, however, it is used as a didactic tool without formalising it as a systematic pedagogical method for the learning of different areas of knowledge to be taught or transferred to the different educational levels.

The development of these proposals is embedded in the need to contribute to media and information literacy, understood as the ability to understand the production, distribution, consumption, reading and production of communication products and the exchanges produced systematically and critically through different media, forms and channels. It is an area that has been promoted for decades by national and international organisations (UNESCO, European Commission or the Ministry of Education and Culture of the Spanish Government) due to its social relevance, and has been intensively researched in scientific terms since the 1980s (Neag et al. 2022; Wulff, 2020; Zhang et al, 2020; Park et al, 2020), together with and complementary to the communicative pedagogical approach (Aparici, 2011; Aguaded et al, 2012; Gálvez et al, 2017; Osuna et al, 2018; Bermejo-Berros, 2021; Gil and Marzal-Felici, 2023). And, from a more specific perspective, film and film literacy (Merchán et al., 2021; Lorenzo-Lledó et al., 2020; Aguaded et al, 1998), which, as highlighted by the international organisations mentioned above and explored in numerous studies published in the last five years (Christ and De Abreu, 2020; Batty et al, 2019), requires not only the decoding of film language, but also the application of critical thinking and the development of production skills that facilitate participation in the active production of audiovisual cultural products, by overcoming passive reception models; hence the importance of its introduction in the classroom (Haas and Tussey, 2023).

Effortless access to large amounts of audiovisual content can lead to recipients becoming sensorially illiterate (Borsini, 2023). This is why teaching is so important in this area, considering the concept of multiple literacies (Guillermina et al., 2023; Cope and Kalantzis, 2000) and thus improving our students' competences and skills.

To understand how the use of films has gone from being associated with a tool to becoming the basis of a methodology, it is necessary to review previous documented experiences, which are numerous and varied, such as Guerra (2004) or García (2005) at secondary school level and García and Hernández (2013) or García (2013) at university level. Many of these studies are based on Blanco (1975) and Ruiz Rubio (1994), without forgetting Gispert (1995), who focused on the need for teacher training in this area in order to design teaching programmes appropriately. At the international level, there are also numerous experiences such as those of Mateus (2017) or Cambra et al. (2017), to name but a few.

The common motivation of all these experiences lies in the benefits that audiovisual media offer for student learning. Dark (2005) has already indicated that films are a visual tool for learning, and if we take into account that, according to O'Connor and McDermott (1997), cited by Velázquez and Díaz and Velásquez (2007), 88% of our perceptual capacity focuses on vision and hearing, film seems to be an excellent tool to achieve significant learning success in students, especially in abstract concepts that are more difficult for young people to assimilate. In addition, it is worth mentioning the benefits that film-based learning (ABC) could provide by increasing students' level of perception and promoting higher thinking processes, as emphasised by Martín-Lobo and Vergara Moragues (2015). In addition to all these benefits, there is the contribution of experiential learning (Kolb, 1984), which helps to fix the most abstract concepts through the identification processes that can be achieved with the language of film (González Requena, 2006). In addition, these identification processes can increase students' motivation, which translates into better academic performance (Usán et al, 2018).

However, there are other studies that argue against the introduction of films in the classroom, such as Casey et al (2007), who argue that the use of films limits active learning as they provide a one-way experience where students are not actively engaged in their own learning and risk being perceived as a distraction rather than a learning tool. There are also history teachers who believe that films distort or re-enact history and that it is therefore not advisable to use them in the classroom (Rodríguez, 2005). Added to this is the teachers' view on the use of films in the classroom, where they are often not used for actual pedagogical reasons but for other time management reasons: extension periods at the end of the course, teacher substitutions or filling gaps. They all have a pedagogical pretext because they are related to the curriculum, but they have no purpose in themselves, as Pla Valls (2010) emphasises.

When contextualising this proposal, the analysis of audiovisual consumption habits should not be overlooked. In recent years, exacerbated by the health crisis, which has restricted the freedom of movement of a large part of the population and thus limited social contacts, not only has television consumption increased in all age groups, but also audiovisual activities other than traditional television consumption (Barlovento comunicación, 2022), so that audiovisual language is part of the daily experience of society in general and, therefore, of students in particular. In addition, on average, more

than 4 hours per week are spent on video consumption on mobile devices and 37% of respondents said that they would increase their consumption if they had unlimited data available. For all these reasons, audiovisual language is part of everyone's daily experience, including the students we have in our classrooms today. Exposure to multiple screens represents non-formal learning in the way they perceive reality. According to the CNMC panels, consumption of content on OTT platforms via VoD systems has increased significantly during these years. Thus, subscriptions to these services, which were rather anecdotal in 2015, have experienced exponential growth. Currently, 62% of the Spanish population has a paid subscription (a significant increase compared to 51% in 2017).

For all these reasons, the cinematographic language contained in audiovisual products is one of the most important sources of communication for students, it is close to them and their everyday life makes it an effective and efficient means to increase their motivation and thus improve their attention span and implication. In turn, this can contribute to improving academic performance, since the development of motivation in the teaching-learning process favours an increase in academic performance (Alemán et al., 2018). However, we must not lose sight of the fact that cinema is not only a means of communication, but also a form of art and should be valued as such in the classroom when it is introduced as a teaching method. In this context, the framework document on cinema and education of the Spanish Academy of Cinema Arts and Sciences (Lara et al, 2019) sets out a plan for audiovisual literacy that seeks the curricular and organic incorporation of cinema as an audiovisual language, as an aesthetic and as a cultural and historical heritage, proposing a series of measures and actions aimed at this objective: the creation of a teaching resources portal and the provision of scene fragments, video clips, making of, graphics, text elements and scripts or the creation of a single database of teaching resources for the use of cinema in the classroom, to name but a few.

In this case, it is a comprehensive approach to the film experience that is in line with other national and international initiatives and platforms for audiovisual education in schools through film, such as AulaCorto (n.d.); the European Film Factory (n.d.); in France, the initiative L'École et le cinéma (s.f.) and the Collège au cinéma programme (n.d.); in the United Kingdom, the film education programmes of the British Film Institute (BFI) (n.d.); in Germany, the national network for film and media education Vision Kino (n.d.); or in Italy, festivals such as the Giffoni Film Festival (n.d.)

This approach to film as a separate entity within audiovisual and media education processes is not only essential but also neuralgic, as it addresses the very essence of the intrinsic value of film and audiovisuals, as they are an essential component of media and audiovisual education, especially in the development of audiovisual competences, both in the field of reading and creativity. However, as we have seen in the overview of the state of the art, the approaches to this subject of study are diverse, pluralistic and complementary. For this reason, it is important to point out that the approach, in the context of this study, addresses a subset of these aspects by focusing on one that has been addressed to a lesser extent, which is the intersection between film and pedagogy and film as a teaching method.

It is also important to bear in mind that the use of films in education is not free from legal conditions and restrictions, which does not always facilitate their inclusion in educational processes. It is unique that neither Law 55/2007 of 28 December on Cinema (Spain, 2007) nor Law 13/2022 of 7 July, General Law on Audiovisual Communication (Spain, 2022) contain an explicit or implicit reference to media and physical literacy as a fundamental element in the creation of a critical film culture and that, beyond the general legal framework established by the Spanish Intellectual Property Law (Spain, 1996), it allows specific uses that promote and facilitate its use. This contrasts with the fact that the importance of initiatives to promote this training is enshrined through the recognition of the "Audiovisual Competence" awards (Ministry of Education, Culture and Sport, 2013) or in regional laws, such as the Andalusian Audiovisual Law (Junta de Andalucía, 2018). In this context, they should therefore rely on films available: a) in the public domain, b) in open repositories such as the Moving Image Archive of the Internet Archive (n.d.), c) in film banks offered by initiatives and programmes such as those mentioned above, or international digital film libraries such as the Archivo Fílmico Pedagógico de Educ.ar (n.d.), the British Film Institute (BFI) Screenonline (n.d.) or the European Film Gateway (n.d.), d) through use limited to fragments or e) through the management of educational licences as offered by the EGEDA (n.d.) administrative body, which is not always easy for a teacher or an individual school.

In order to systematise ABC as a learning method, a systematic literature review (SRL) was conducted to examine in depth the characteristics of the object of study, the approaches towards it, under what methods, with what scope, from what disciplines and with what results. In this context, it should be mentioned that the use of SLR makes it possible to identify, understand and evaluate the available scientific information on a research area over a certain period. The importance of this tool lies not only in the formal knowledge of the object of study, but also in the fact that we learn about similar research that helps us to broaden our view of the subject and obtain evidence of the results obtained by applying the techniques described in this research. This also favours knowledge of how the use of

film and audiovisuals media is reflected in schools, in this case from the perspective of research and not just practice. Three phases were identified for this research, following Higgins and Green (2006), Kitchenham (2004) and the Centre for Reviews and Dissemination at York University (2009): planning, conducting and reporting findings to make the process rigorous, organised, analytical and repeatable. This area of study is relatively new and there are not many SRLs on this topic that allow us to know the current state of research in this area. This opens up the possibility of applying this research technique to the subject of study.

The SLR retrieved the scientific literature published in the most important academic databases: Web of Science, Scopus and Google Scholar, ran a clustering process and then performed a quantitative and qualitative analysis. In addition, an approach to the language of film from the field of formal education was used. Discovering how academic studies are conducted in this area and where they are heading allows us to propose future research that promotes the use of film in the classroom as a learning method.

The general objective of this research is to identify the level of maturity and formalisation of publications on the object of study through the methodological design of the research reflected in the academic articles published between 2010 and 2021. To this end, the following variables were selected as study variables: the techniques used to collect information, the type of data collected, the characteristics of the samples and the analysis techniques used, and the use of film language in teaching (teaching method or resource). To achieve the general aim of this research, the following questions formulate the specific aims guiding the research:

- SO1. Classify the purpose of the research reported in the articles.
 - Q1.1 What is the objective of the research?
 - Q1.2 Are there differences in research objectives between disciplines?
 - Q1.3 Are there differences in the purpose of the research between educational stages?
 - Q1.4 Does the research objective determine the sample size?
 - Q1.5 Is there a link between the research objective and the analysis conducted?
- SO2. Characterise the types of research described in the articles.
 - Q2.1 What is the type of research used?
 - Q2.2 Are there differences in the type of research between educational stages?
 - Q2.3 Is there a relationship between the type of research described across disciplines?
- SO3. Identify the data collection techniques described in the articles.
 - Q3.1 What is the dominant data collection technique?
 - Q3.2 Are there differences in data collection techniques between disciplines?
 - Q3.3 Are there differences in the data collection technique between educational stages?
 - Q3.4 Does the type of data collection determine the sample size?
 - Q3.5 Is there a relationship between the type of information collection and the data obtained?
- SO4. Identify the analysis techniques used.
 - Q4.1 Which analysis techniques are predominant?
 - Q4.2 Is there an association between analytical technique and discipline?
 - Q4.3 Is there an association between the analysis technique and the educational stage?
 - Q4.4 Is there an association between the analysis technique and the research objectives?

2. Methodology

Quantitative and qualitative techniques were used to assess the current situation of the research area. The study was conducted in two parts. The first part consisted of a systematic literature review (SLR), from which the publications related to the object of study were extracted. In the second part, the content of the selected articles was analysed by performing a cluster analysis focusing on the methodological part of the publications. In this way, the most relevant articles in this area of the study are highlighted and their formal characteristics are made clear.

The previous procedure for a systematic literature review (SLR) is fundamental to ensuring the proper execution of the research and therefore to achieving the general objective set. For this reason, this research has been conducted in several phases, which are described below:

2.1 Phase I: Systematic Literature Review

In this phase, publications focusing on the introduction of film in the classroom were evaluated following the PRISMA protocol (Urrútia and Bonfil, 2010; <http://www.prisma-statement.org>) to ensure future replicability and reproducibility. The following steps were observed:

I.1: Eligibility criteria

First, the criteria for the selection of publications were defined. The temporal search focused on articles published between 2010 and 2021. This is a sufficiently long period to observe both the evolution of the phenomenon and its current situation. Furthermore, search terms were used in both Spanish and English to capture the scientific literature available in both languages. As we are working in two different fields, namely communication and education, the word stems were used so that the search queries would yield all their variants.

To identify the specific words for both the communication and education domains, we used the bibliography from a previous study on the state of the art (Díaz-Herrero and Gertrudix, 2021). For this purpose, an initial search was performed with a limited number of keywords and, after selecting the selected articles, a list was drawn up for each domain and language. The words selected for education in Spanish were: Asignatura, Aprendizaje*, Aula*, Clase*, Colegio*, Conocimiento*, Currículo*, Curso*, Didáctica*, Docente*, Educar*, Enseñar*, Estrategia*, Estudia*, Experiencia*, Forma*, Herramienta*, Material*, Medio, Método*, Pedagogía*, Recurso y Secundaria. The keywords for cinema in Spanish are: Audiovisual*, Cine, Cinematográfico*, Documental*, Lenguaje cinematográfico, Multimedia, Película* and Gran pantalla.

The words from the field of education in English are Classroom*, University*, Course*, Development, Education, Experiencia*, Help, Learn*, Methodology*, Pedagogical, Secondary School, Strategy*, Study*, Tool* and Understand*. And finally, the words from the field of cinema in English are: Audiovisual*, Cinema*, Clips, Document*, Film*, Media Literacy, Film*, Multimedia, Video and Visual Literacy.

Once the keywords for each of the areas were determined, the Boolean operators with logical connectors were created to guide the search. This involved combining each keyword relating to cinema with all words relating to education according to the following search equation, in which the words are combined with the logical operators AND and OR to construct each of the Boolean operators: "Palabra cine 1" AND ("Palabra Educación 1" OR "Palabra Educación 2" OR "Palabra Educación 3" [...]) (Carbonell et al., 2021).

The search strings can be found in Annex I.

I.2: Search

Once the search equations were defined, the Publish or Perish programme was used to retrieve the scientific literature in Google Scholar, a programme widely used in research (Curiel-Marín et al., 2019). For the Scopus and Web of Science databases, we used their own search engines. These three databases were chosen because they are the most relevant sources that provide access to a wider scientific production.

From each of these databases, a matrix of results was created for each search equation. To facilitate the filtering of results, all matrices were standardised in CSV format. A total of 54 matrices were obtained before standardisation, one for each search equation from each of the selected databases, which were initially processed separately during the filtering phase and then standardised into a single final matrix.

Publish or Perish software was used to export the Google Scholar searches, including the bibliographic data and their impact metrics, to obtain the following information: citations, authors, title, year, source, citation URL, publisher, article URL, GS rank, query date, type, DOI, ISSN., volume, issue, start pages, end pages, ECC, citations per year, citations per author, number of authors, age, and abstract.

In the case of Scopus, the searches were exported with the following fields: Authors, Author(s) ID, Title, Year, Source Title, Volume, Issue, Art. No., top of page, bottom of page, page number, cited by, DOI, link, affiliations, authors with affiliations, abstract, author keywords, index keywords, document type, publication stage, open access, source, EID.

In the case of *Web of Science*, searches were exported with the following fields: *Publication Type, Book Authors, Book Editors, Book Group Authors, Author Full Names, Book Author Full Names, Source Title, Book Series Title, Book Series Subtitle, Language, Document Type, Conference Title, Conference Date, Conference Location, Conference Sponsor, Conference Host, Author Keywords, Keywords Plus, Abstract, Addresses, Reprint Addresses, Email Addresses, Researcher IDs, ORCID, Funding Orgs, Funding*

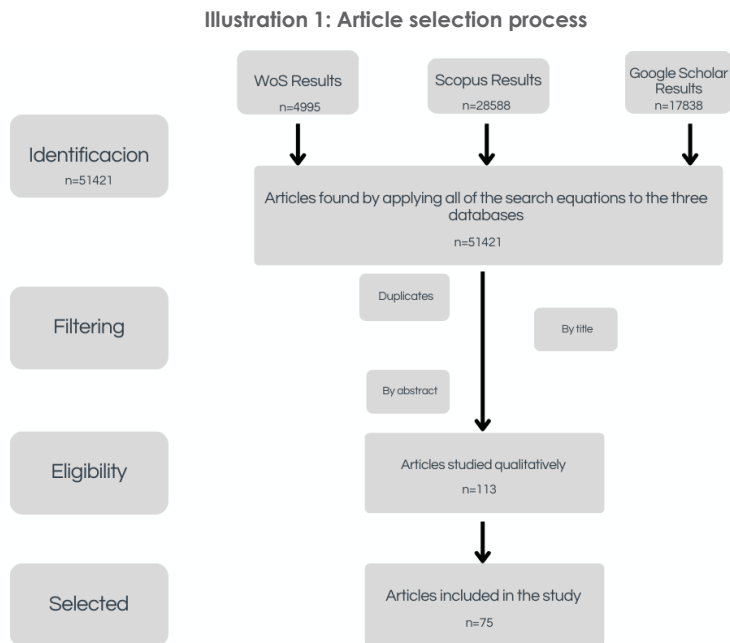
Text, Cited References, Cited Reference Count, Times Cited, WoS Core, Times Cited, All Databases, 180 Day Usage Count, Since 2013 Usage Count, Publisher, Publisher City, Publisher Address, ISSN, eISSN, ISBN, Journal Abbreviation, Journal ISO Abbreviation, Publication Date, Publication Year, Volume, Issue, Part Number, Supplement, Special Issue, Meeting Abstract, Start Page, End Page, Article Number, DOI, , Book DOI, Early Access Date, Number of Pages, WoS Categories, Research Areas, IDS Number, UT (Unique WOS ID), Pubmed, IdOpen, Access Designations, Highly Cited Status Hot, Paper Status and Date of Export.

I.3: Selection of studies

Once the 54 matrices were obtained, the results were filtered, eliminating duplicate results and studies that were not applicable to this research due to the absence of a direct relationship with the object of study. This process was conducted in two phases. In the first phase, the results were filtered by title, eliminating those references that were not applicable to this study:

- Not related to education.
- Not related to film (including TV series, documentaries, short films and animation, but excluding educational videos, ad hoc materials, class or practical recordings, etc.).
- Not related to formal education (thus excluding experiences outside educational institutions, non-formal courses and other non-formal training).
- Related to the production of audiovisual media by students.

A summary of the selection process and the criteria followed in each of the phases can be seen in Illustration 1:



Source: Authors' own compilation

2.2. Phase II: Data Mining Process

A second filtering phase was performed involving all the filtered data obtained in the original search matrices, based on the summary and following the same inclusion and exclusion criteria explained in the study. Special attention was paid to the references that were not identified as duplicates due to typing errors at the beginning, and those that contained common fields in the databases were selected to unite them in a single matrix, excluding those that could not be consulted.

Once the final matrix was created, all articles were retrieved for in-depth analysis. The summary of the references found, filtered and analysed is as follows:

Table 1: Search results

	WoS	Scopus	Google Scholar	Totals
Gross	4995	28588	17838	51421
Filtering	9	14	52	75

Source: Authors' own compilation

2.3. Phase III: Qualitative and Quantitative Analysis

Firstly, a qualitative cluster analysis of the selected articles was performed, in which the 75 articles that comprised the final sample were read individually. The analysis of the variables in which the information contained in the selected articles was classified according to the values, can be seen in the table in Appendix II.

In order to proceed with the study, an analysis sheet was created using an online questionnaire (Díaz-Herrero and Gértrudix, Zenodo, 2022b) containing the following fields, which allowed the results to be analysed quantitatively:

- Database
- Year of publication
- Number of citations
- Language
- Discipline
- Educational stage
- Use of film in the classroom
- Sample size
- Type of sample
- Hypothesis
- Type of research
- Objectives
- Data collection techniques
- Nature of the data obtained
- Data collection
- Analysis techniques
- Types of analysis
- Recommendations for use
- Follow-up

The collected data were exported in Excel format for further analysis (Díaz-Herrero and Gértrudix, 2022).

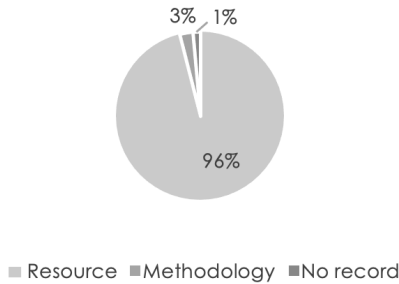
3. Results and analysis

The analysis used in this study was both qualitative, with the clustering process, and quantitative, in answering each of the research questions posed at the beginning of this paper.

We began by analysing the objective of the research. In almost all of the studies analysed, 96%, film is introduced into the classroom as a didactic resource and not as an educational methodology. There are only two of the 75 experiences analysed in which the use of film language is conceived as a methodology in itself. These data show that the object of study proposed in our research, Film-Based Learning (ABC), is a methodological line to be explored and that the level of application and maturity of this methodology is still incipient.

Due to the fact that practically all the articles analysed use film as a resource, it is not possible to establish differences between educational stages. The fact that these two references belong to the university stage cannot be considered significant, just as the fact that both studies belong to different disciplines does not allow any relationship to be established in this respect. Nor can any relationship be established with the type of analysis conducted in the studies.

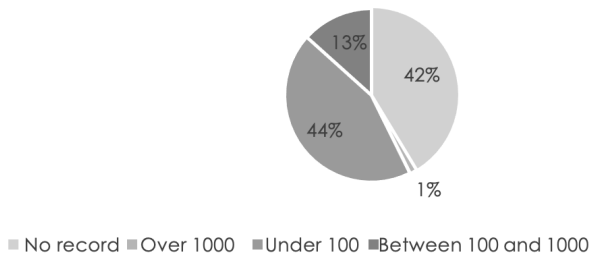
Figure 1: Use of film in the classroom



Source: Authors' own compilation

In more than 40% of the references analysed (31 out of 75), the sample size is not specified, and only one of them exceeds 1000 people studied. Moreover, 44% (33 out of 75) of the analysed samples are smaller than 100 persons. These data make it impossible to establish a relationship between the sample size and other variables, including the study object or the chosen data collection technique. Almost all the studies are of the same size, which makes it impossible to establish a difference between them.

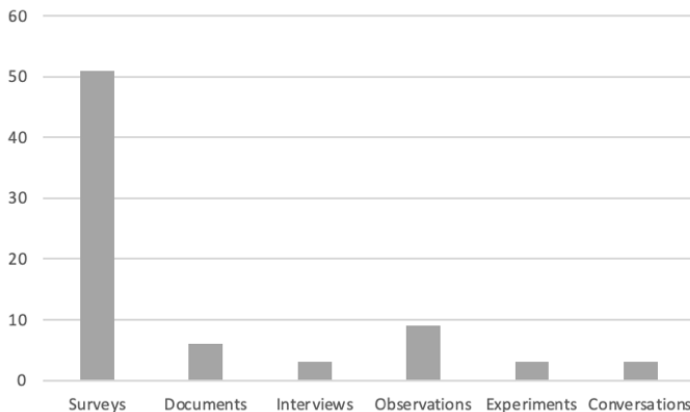
Figure 2: Sample size



Source: Authors' own compilation

In terms of the dominant data collection techniques, as we can see in Figure 3, the predominance of surveys is overwhelming with respect to the rest of the data collection techniques.

Figure 3: Data collection techniques



Source: Authors' own compilation

If we set as a criterion that teaching tests are collected as surveys, since they are considered as aptitude surveys, together with attitude surveys to know the opinion of the members of the sample studied, we find that most studies opt for this type of information collection. We are concerned about the number of experiments where we cannot set up a control group to test how effective the introduction of films in the classroom is. Since there is such a clear majority, we find no difference in the use of data collection techniques between the disciplines that appear in the references studied. Similarly, we

found no differences between educational levels when it came to the choice of these data collection techniques.

The number of references in which the type of analysis used does not appear is very high, namely almost half of the selected references. In contrast, most of the studies in which the type of analysis occurs are quantitative studies, although the conclusions of the studies largely do not lead the authors to make recommendations for post-study use, and the number of studies in which follow-up has occurred (or is planned) is not significant. Apart from the small sample size, the quantitative analyses do not allow significant relationships to be established between the type of analysis and the other variables analysed.

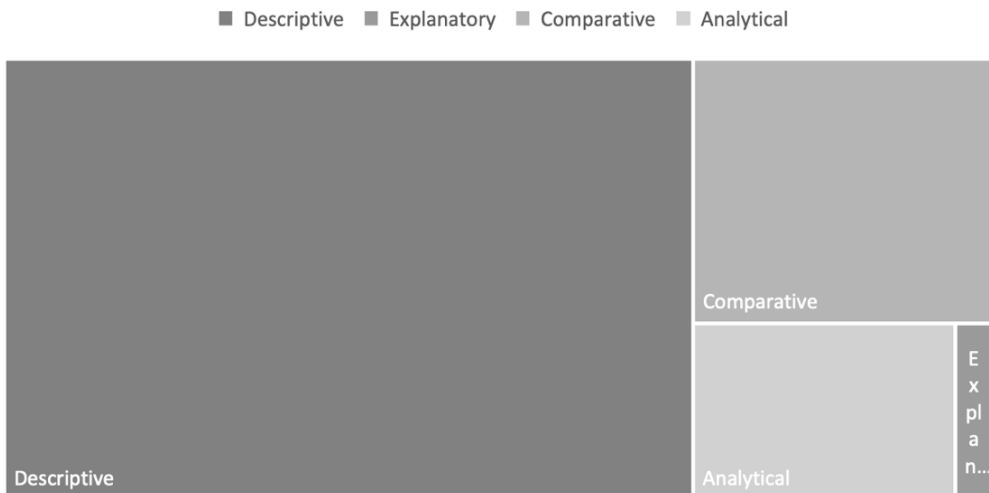
Figure 4: Type of analysis



In the experiences with quantitative studies, we found representation from all educational stages, so this variable does not allow us to establish differences. However, in all these references, the information collection technique used was surveys, and we found equal representation of attitude and opinion surveys.

If we proceed to analyse the differences in the type of research to study its relationship with educational stages and disciplines, we find an overwhelming majority of descriptive research with respect to the rest. This predominance, involving representation from all educational stages as well as from different disciplines, does not allow us to establish relationships between variables, but it does corroborate once again that the level of formalisation of this area of study is still low, as the research focuses on describing and not on elaborating more complex and structured data analyses that would require, among other things, control groups and larger samples.

Figure 5: Type of research



Source: Authors' own compilation

If we further examine the nature of the analysis conducted in this research and its subsequent use, we find that most of the articles do not suggest any recommendations for use, but there are even fewer references in which there is a subsequent follow-up of the suggestions drawn from the discussions of the results. More specifically, in 73% of the references analysed there are no recommendations for use and in 91% of the references no follow-up is suggested. This not only confirms yet again that the level of maturity of this field of research is remarkably low, but also does not allow us to establish significant relationships between the type of research, the type of analysis and the data obtained in the studies.

4. Discussion

The greater part of the use of film in the classroom is limited to its use as an aid and there is hardly any research on its introduction as a teaching method, which confirms the findings and conclusions of the Academy of Motion Picture Arts and Sciences (Lara et al., 2019).

Most of the research analysed is based on small samples and their impact indices are not high, although we searched for references in the main databases. Moreover, these references do not include follow-up or recommendations for application or extrapolation, which limits the scope and dissemination of the results obtained.

We did not find significant relationships between the variables analysed due to the predominant nature of the research, which is mostly descriptive and based on the results of surveys, regarding both aptitude and attitude. In many of them, the type of analysis performed in this study is not even mentioned, so the degree of formalisation of this research is still very low.

In none of the references analysed in this study did we find any reference to the legal restrictions that teachers must comply with if they want to show an unabridged film in a classroom, even if it is for educational purposes. This management is individual and requires applying for authorisation from different entities such as EGEDA (Society of Services for Audiovisual Producers), SGAE (General Society of Authors), DAMA (Audiovisual Media Copyright) or AISGE (Artists and Performers, Management Society), as well as from the distributors of these films. Some platforms, such as Netflix, allow their original documentaries to be streamed once for educational purposes without requesting authorisation, but there is no mention of this in any of the references analysed.

All this leads us to conclude that Film Based Learning (ABC) is a learning methodology in the process of validation, but that, in view of the results of this systematic review of the literature, its use in the classroom is not yet widespread.

5. Limitations

The results obtained show that they need to be considered in the context of the limitations imposed by the current state of the art. In general, many of the pedagogical activities aimed at promoting the use of cinema in the classroom are not reflected in the studies published in scientific journals. This is consistent with a more global trend which means that educational experiences are not always accompanied by scientific evidence for their development (Hargreaves, 1996). The publication of educational experiences is limited by aspects such as the mistrust between teachers and researchers (Muñoz-Repiso, 2010) and the low expectation that studies of this type conducted in non-university educational institutions will find a place in scientific journals (Hancock, 1997). Consequently, the number of publications that can be found in academic databases does not reflect the lively activity in classrooms nor the real impact of these initiatives to promote the use of films in the classroom. The Aula Corto, the European Film Factory, L'École et le cinéma, the British Film Institute (BFI), Vision Kino or the Giffoni Film Festival have a real impact on schools, but their results are rarely reflected in academic publications. This means that one of the study's limitations relates to the informative dimension of these actions and that the low formalisation and low level of maturity of these studies have a systemic basis that must be highlighted so that measures can be taken to enable change. Without visibility, without the formulation of formalised research procedures, it will be difficult to overcome the current limitations.

Second, this research relies on keywords found in an earlier systematic literature review (Díaz-Herrero and Gertrudix, 2021). Although this is a strength as it consolidates the results and makes them comparable, it can also lead to a bias in the search for references as predetermined search equations are used. In any case, the fact that these are provided in the appendices provides a mechanism for replication by other researchers and discussion of a posteriori results with an SLR conducted on this topic and approach.

Limiting the search to only two languages, English and Spanish, also omits some references that would have been interesting for our review study.

On the other hand, only references on the use of films as a teaching method were considered, so that the use as a resource was differentiated. As explained in the methodology, the other uses of films in the classroom, such as audiovisual production or participatory models, which undoubtedly improve students'

critical approach when later engaging with films, are outside the scope of this study. Nevertheless, this is an area that requires specific, detailed research that is beyond the scope of this study.

6. Conclusions

The results of the systematic review of the literature show that the degree of maturity and formalisation of this field of research, especially in its methodological dimension, is still extremely low. Most of the studies analysed refer to the use of films as a resource, so that no statistically significant relationships can be established with any of the variables specified in the research questions. Furthermore, the samples are too small to draw any other conclusions and both the predominance of the survey as an information gathering technique and the purely descriptive nature of the research, with no control group and no subsequent follow-up of experiences, show that we are dealing with an area of research which is still in its infancy and in which there is still much to be done. Research in this area of knowledge needs to be more formalised and these experiences should be followed up more closely to increase the maturity of the studies.

Film is included as a tool in teaching and learning activities, but not as a method that can mediate the learning of abstract concepts. For this approach, which is the focus of this study and is based on the proposal of film-based learning (ABC) as a teaching method, there are no scientific studies that describe its application in the classroom and even fewer that evaluate its results. This opens a line of research to validate the methodology through further studies, including validation through expert judgement and the development of practical interventions in the classroom against which the results can be evaluated.

In addition, the legal restrictions of showing films in their entirety in the classroom, even for educational purposes, must be considered, of which few teachers are aware. The fact that this is not mentioned in any of the references analysed is proof of the low level of maturity of this area and of the need for further research in this area, as it is not perceived that its sparse use requires concern that goes beyond avoiding piracy by using original physical media (e.g. having the film on DVD in the school library) or having a subscription to an SVOD platform that allows it to be seen in the classroom. In this respect, teacher training is particularly important.

It is a method that can be transferred to most educational levels and fields of knowledge. It would therefore be interesting if the research conducted in this regard included recommendations for its application. In this sense, it would also be extremely important for all levels of education, especially non-university ones, to be incentivised to publish their research results and thus significantly increase the transfer of knowledge. This would also lead to greater dissemination and scientific transfer, so that the education sector may benefit from scientific findings in its methodological development.

7. Contributions

Task	Author 1	Author 2
Conceptualisation	X	X
Content curation		
Formal analysis	X	
Acquisition of funds		
Research	X	
Methodology	X	X
Project management		
Resources		
Software		
Monitoring		X
Validation	X	X
Visualisation		
Drafting: original draft	X	X
Drafting: proofreading and editing	X	X

8. Acknowledgement

Translator: Isabel Rodríguez (Tridiom).

9. Declaration of conflict of interest

The authors declare that there is no conflict of interest.

10. Responsible declaration of use of Artificial Intelligence

No Artificial Intelligence tools have been used in any of the sections of the text.

11. Additional materials

The full search equations can be found in Annex I and the analysis of variables in Annex II of this article. The permanent URL of the database is <https://doi.org/10.5281/zenodo.7122755>.

The permanent URL of the questionnaire used is <https://doi.org/10.5281/zenodo.7122787>.

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Annex I: Search strings

1) Audiovisual* AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

2) Cine AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

3) Cinematografic* AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

4) Documental* AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

5) Lenguaje cinematográfico AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

6) Multimedia AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

7) Película AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

8) Gran Pantalla AND (Asignatura OR Aprend* OR Aula* OR Clase* OR Colegio* OR Conocimiento* OR Curricu* OR Curso* OR Didactic* OR Docent* OR Educa* OR Enseña* OR Estrategia* OR Estudia* OR Experiencia* OR Forma* OR Herramienta* OR Material* OR Medio OR Metodo* OR Pedagóg* OR Recurso OR Secundaria)

9) Audiovisual* AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

10) Cine AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

11) Clips AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

12) Documentar* AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

13) Film* AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

14) Media Literacy AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

15) Movie* AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

16) Multimedia AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

17) Video AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

18) Visual Literacy AND (Classroom* OR College* OR Course* OR Development OR Education OR Experience* OR Help OR Learn* OR Methodolog* OR Pedagogical OR Secondary School OR Strateg* OR Stud* OR Tool* OR Understand*)

Annex II: Description of variables

Variable	QL/QT [QL] Qualitative [QT] Quantitative	N/O/D/D/C N] Nominal [O] Ordinal [D] Discrete [C] Continuous	Value	Definition
Year	QT	OD	From 2010 to 2020	Year of publication
Quotations	QT	OD	Ordinary non-decimal numbers	Number of times the publication has been cited
Database	QL	N	WoS Scopus Google Scholar	Database in which the article was found
Language	QL	N	English Spanish Another	Language of the article

Variable	QL/QT [QL] Qualitative [QT] Quantitative	N/O/D/D/C N] Nominal [O] Ordinal [D] Discrete [C] Continuous	Value	Definition
Object of study: discipline	QL	N	Medicine Law Science Mathematics Social Sciences Administration Literature Languages Education Economy Values	Field of knowledge in which the object of study of the research article is classified.
Subject of study: Educational stage	QL	N	Early childhood/ Elementary Secondary/ A-levels / University	Educational stage at which the study takes place
Object of study: Use	QL	N	Resource Methodology Other	The type of use of film in the classroom proposed by the article
Sample size	QT	OD	Non-decimal ordinal number	Number of participants in the study
Type of samples	QL	N	Simple random sampling Systematic sampling Stratified sampling Cluster sampling Quota sampling Judgmental Sampling Snowball Sampling Purposive Sampling No record	Sampling techniques used to select the study participants
Hypothesis statement	QL	N	Yes No	The assumptions are determined in the article or not.

Variable	QL/QT [QL] Qualitative [QT] Quantitative	N/O/D/D/C N] Nominal [O] Ordinal [D] Discrete [C] Continuous	Value	Definition
Type of research	QL	N	Descriptive Characterise Descriptive Categorise Descriptive Classify Descriptive Define Descriptive Describe Descriptive Detail Descriptive Detect Descriptive Diagnose Descriptive Study Descriptive Identify Descriptive List Descriptive Specify Comparison Associate Comparison Similar Comparison Compare Comparison Contrast Comparative Determine Comparison Differentiate Analytical Analyse Analytical Criticism Analytical Decompose Analytical Explanatory Analyse Explanatory Criticise Explanatory Decompose Explanatory Establish Participatory Acting Participatory Intervention Participatory Modify Participatory Participate Another	Types of research and the objectives pursued by the study
Number of types of information collection	QT	OD	1 2 Greater than 2 No record	How many types of data collection are there in the study?

Variable	QL/QT [QL] Qualitative [QT] Quantitative	N/O/D/D/C N] Nominal [O] Ordinal [D] Discrete [C] Continuous	Value	Definition
Main data collection techniques	QL	N	Delphi Focus groups Individual interviews Focused interviews Attitude surveys Opinion polls Field experiments Group experiments Subject experiments Content analysis Discourse analysis Documentary analysis Self - Observation Systematic observation Participating observation Conversations No record	Main information collection techniques used in the studies
Secondary data collection techniques	QL	N	Interviews Surveys Experiments Documents Remarks Conversations No record	Secondary information collection techniques used in the studies
Nature of the data	QL	N	Continuous quantitative data Discrete quantitative data Binary qualitative data Categorical qualitative data No record	Typology of the data collected in the study
How data are collected	QL	N	Declared data Observed data Experimental data Models or simulations No record	How the data were obtained in the study
Number of types of analysis	QT	OD	1 2 Greater than 2 No record	How many analysis techniques are there in the study?
Types of analysis	QL	N	Qualitative Quantitative No record	Predominant analysis technique in the study

Variable	QL/QT [QL] Qualitative [QT] Quantitative	N/O/D/D/C N] Nominal [O] Ordinal [D] Discrete [C] Continuous	Value	Definition
Recommendations for application	QL	N	Yes No	The article provides recommendations for implementation or non-implementation
Follow-up	QL	N	Yes No	Has the experiment been followed up or not