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## Finding Scotland's Cinema Factor: From *The Cinema in Education* (1925) to *The Film in the Classroom* (1933)

This article discusses two experiments that aimed to establish the educational value of cinema: the 1925 Cinema Commission's report *The Cinema in The Author (s)Education*, and *The Film in the Classroom*, an experiment carried out by Glasgow Corporation between 1932 and 1933. Both experiments were part of a discourse on educational cinema that recognized film as a powerful visual medium with a profound impact on how children learned about and interacted with the world around them. The experiments contributed to the fledging of the educational film movement of the 1930s without, however, mirroring the transition to sound occurring in cinemas at that time.

**Keywords:** educational cinema, screen education, 1920s; 1930s; classroom films, silent films

The establishment of the British Film Institute (BFI), in 1933, represented a major effort to support and develop educational and other forms of non-commercial cinema, and consolidated many disparate initiatives driven by film societies, educational and religious bodies.<sup>1</sup> The institutionalization of this interest in the social role of cinema beyond the commercial picture house, however, came comparatively late. The development of educational cinema had been pioneered in other countries during the silent era and long before British authorities officially recognized its importance. As Jennifer Horne has demonstrated, public libraries in the United States experimented with the use of films as early as 1910.<sup>2</sup> In Sweden, a State School Film Department (Skolfilms Avdelning) was founded at the end of the 1910s which promoted the use of non-fiction films for the teaching of so-called object lessons.<sup>3</sup> Similar structures were put in place in France between 1918 and 1924.<sup>4</sup>

Three major obstacles were in the way of establishing structures in Britain facilitating the development of educational cinema earlier. The first two stem from an impasse between the film industry and the educational sector. On the one hand, the industry was sceptical about the profitability of producing films that were suitable for classrooms but unsuitable for commercial cinemas, which resulted in the lack of a reliable supply of strictly educational films. On the other hand, education authorities were reluctant to introduce cinematography on a large scale because the production of educational films fitting with the school curriculum was insufficient.<sup>5</sup> A third obstacle was that the exhibition of flammable 35mm film required a Cinematograph Licence, representing

an additional administrative hurdle for schools. The emergence and widespread adoption of 16mm safety film had largely eliminated this problem by the 1930s, but the issue of incompatibility continued and was amplified by another technological shift – the transition to sound.<sup>6</sup> Thus, while the 1930s saw an increase in the supply of educational films on 16mm through agencies such as the Empire Marketing Board, many of these were sound films that schools were unable to exhibit as they lacked the appropriate equipment for playing them.<sup>7</sup> The trade's disinclination to explore educational cinema as a secondary market was also intensified by the transition to sound. The need to equip cinemas for sound technology stretched a British film industry that already had to adapt to uncompromising economic practices brought in during the First World War,<sup>8</sup> and the growing market dominance of the feature-length fiction film, another trend set by American production companies. The latter trend meant that even vaguely educational films such as travelogues and topicals were no longer a main attraction but only hired as support for the feature film.<sup>9</sup> Overall, these changes made the production and exhibition of educational films an increasingly risky and non-profitable venture, and ultimately positioned 'the social function of [commercial] cinema as primarily a site of entertainment rather than information'.<sup>10</sup> Other agencies had to step in if a British cinema culture was to evolve that was less defined by economic imperatives and more driven by educational and cultural concerns.

One such agency was the Commission on Cultural and Educational Films, launched by the Institute for Adult Education in 1929 to promote the use of film as a visual tool in education and the teaching of 'film appreciation'.<sup>11</sup> The publication of its report *The Film in National Life* (1933) and the emergence of a nascent civic film culture created by numerous organizations producing and exhibiting films on 16mm eventually created sufficient momentum for the establishment of the BFI. A year later, the Scottish Film Council (SFC) was founded with a similar remit to develop film culture. The early years of both organizations were dominated by an agenda to use film as a teaching aid, but this eventually opened up to wider notions of screen education that recognized the artistic value of films.<sup>12</sup> While insightful studies exist discussing the film education movement that followed, the debates preceding the formation of the BFI and the Scottish Film Council have hardly been considered. Yet, these debates were important mediations of cinema's social role, dominated as they were by authorities and civic organizations pondering how this role should be regulated, defined and developed. This article focuses on two experiments that played an important part in this discourse: the National Council of Public Morals' 1925 Cinema Commission, which published a report called *The Cinema in Education* (1925), and an experiment carried out by Glasgow Corporation's Education Department between 1932 and 1933, which resulted in the 1933 publication of a report, *The Film in the Classroom*. The 1925 Cinema Commission was conducted by an organization operating on a national level and with a track record of inquiries into

a variety of social issues,<sup>13</sup> while the Glasgow experiment was driven by a local authority looking to justify investment into an innovative teaching method. What both experiments had in common, however, was that they were undertaken to ascertain the educational value of film as a visual tool and to explore the school as an alternative exhibition context to the commercial picture house. As the following sections demonstrate, both experiments defined the educational value of film by its usefulness as an aid in supporting knowledge transfer and memorization. While sound would eventually play an equally important role within that mission, the main concern of both experiments was with the ability of silent films to make knowledge tangible for school children through visual illustration. The first section below will focus on the earlier experiment, which took place in London during the early 1920s; the second part of the article will analyse the Glasgow experiment carried out almost a decade later but adopting a similar approach.

### **The National Council of Public Moral's Cinema Commission of Inquiry – *The Cinema in Education* (1925)**

In the absence of any unified action taken by British authorities in exploring cinema's potential for education, 'a committee of teachers, psychologists, and other experts in education, together with representatives of the trade' was appointed by the National Council of Public Morals (NCPM), a non-statutory body founded by a Presbyterian, Reverend James Marchant, in 1911.<sup>14</sup> Responding to anxieties about cinema's role in British society, the NCPM had set up its first Cinema Commission in 1917 to assess its overall impact on children and young people. This earlier Commission had already emphasized the educational value of film but it had established also that an educational film could lose its merit in the middle of a mixed commercial cinema programme and that it therefore required thorough preparation in school to have a lasting effect.<sup>15</sup> Building on those earlier results, the second Cinema Commission sought to investigate 'the durability of cinema impressions on school children'; to measure 'fatigue caused by instruction by means of the cinema'; and to carry out 'comparative tests of education by cinematograph methods with those by normal methods of instruction'.<sup>16</sup>

These pedagogical questions were addressed mainly by a Psychological Sub-Committee, while the problems of the practical application of cinema in schools were allocated to a Cinema Experiments Sub-Committee. The following two sections will summarize the work and results of both committees separately before discussing the Commission's relevance in the larger context.

The Psychological Sub-Committee was headed by Charles Spearman, Grote Professor of Mind and Logic and Head of Psychology at University College London (UCL). Born in London, Spearman had trained in experimental psychology at the University of Leipzig. In 1907, he had taken up employment with UCL, where he developed a branch known as the London School of Psychology. Spearman is well known for his advances in intelligence theory, in particular, the two-

factor doctrine of general and specific intellectual functions, one of the first correlational methods designed to find a general factor indicating a person's intelligence.<sup>17</sup> While working on the Cinema Commission he published *The Nature of Intelligence and the Principles of Cognition* (1923), where he proposed an epistemology of cognition based on ultimate psychological laws. His work on factor analysis was not only significant in the context of the 1925 Cinema Commission; it was also important for the later researchers of the Glasgow experiment, who tried to find a so-called 'cinema factor' specifying a film's educational impact.

The work of the Psychological Sub-Committee took place at UCL, where the psychological classroom had to be fitted with a cinematograph apparatus as well as fire-proof projection boxes and doors in order to make the screening of flammable film possible and safe.<sup>18</sup> While the terms of reference proposed more, the Committee concentrated on only two research objectives: to test, first, the accuracy and, second, the stability of children's memories of film lectures compared with slide and oral lectures, a focus that corresponded directly with Spearman's specific interest in cognitive functions. With 130 out of 160 pages, the final report of the sub-committee's research constitutes the largest part of *Cinema in Education*.

The researchers divided a class of twenty-three boys and seventy-nine girls into smaller groups. According to Spearman the disproportion in numbers was due to the timing of the boys' experiment, starting off with forty individuals, but 'owing to the fact that the holiday season was approaching, attendances fell rapidly during the experiment'.<sup>19</sup> The report does not mention the age of the children but given the subjects of the lessons they were presumably between 11 and 13 years old. The children received lessons on biological or geographical subjects either through silent film alone, a film talk (additional comments by the teacher), slides alone, a slide talk or an oral lesson. In all, seven lessons were given, hence seven films screened: *The Sticklebacks* by Pathé Frères; *The Caddis Fly*, *The Volcano I and II* by the Educational Films Company; *Solving Canada's Fuel Problem*, *Salmon Fishing* and *The Enemy of the Forest* by Jury's Imperial Pictures Ltd.<sup>20</sup> The children were prompted to write an essay immediately after the lessons and were invited to write another essay twelve months later without being confronted with the lecture material again. In order to analyse what the children had remembered and understood, the researchers first collated the individual pieces and divided them into particular and general statements. The essays were further partitioned into reports and interpretations of subtitle material as well as descriptions of moving pictures or slides. These were further categorized as descriptions of living things, inanimate objects or localities. Additionally, the quality of statements was determined by analysing whether a child was likely to have used rote memory techniques or displayed a more intelligent grasp of a problem, playing to Spearman's strength as a researcher.

Finally, the children's statements were counted, compared and tabulated to deduce statistically the value of a cinema lesson compared with other lessons. To illustrate, table V of the report combines the girls'

results on the memory of picture material, showing that oral lesson essays contained more general statements while silent film lessons gained in particular descriptions, especially in reference to 'action' (Figure 1).

The overall results indicated that moving pictures were best suited to portraying movement ('action'), an outcome the researchers had to some extent expected: 'Gains to cinema essays here run into the hundreds per cent'. But the results in regard to inanimate objects, such as tools, surprised them. The report concluded that 'film essays gain here, probably because seeing things in motion explains their use'.<sup>21</sup> Sometimes the researchers identified situations when children had remembered details of what they had seen, but revealed a flawed understanding of the issue

Figure 1. Table listing results. Source: NCPM, *The Cinema in Education*, 80.

TABLE V (b).  
*Picture Material (Detailed Analysis). Girls' Results Only.*

	Action.	Living Things.	Inanimate Objects.	Localities.	Interpretations.	Total.
<b>GENERAL.</b>						
<b>Film alone</b> .. ..	<b>1.4</b>	<b>0.5</b>	<b>0.9</b>	<b>0.4</b>	<b>0.3</b>	<b>3.5</b>
<b>Slides alone</b> .. ..	<b>1.3</b>	<b>0.6</b>	<b>1.1</b>	<b>0.8</b>	<b>0.2</b>	<b>4.0</b>
Film talk .. ..	4.5	0.6	6.3	1.8	1.0	14.2
Slides talk .. ..	6.1	0.8	4.7	1.8	1.2	14.6
<i>Oral</i> .. ..	<i>13.4</i>	<i>2.3</i>	<i>9.3</i>	<i>3.9</i>	<i>2.0</i>	<i>31.0</i>
<b>PARTICULAR.</b>						
<b>Film alone</b> .. ..	<b>35.5</b>	<b>14.4</b>	<b>17.6</b>	<b>8.6</b>	<b>1.8</b>	<b>77.9</b>
<b>Slides alone</b> .. ..	<b>16.0</b>	<b>12.1</b>	<b>14.8</b>	<b>8.8</b>	<b>1.7</b>	<b>53.4</b>
Film talk .. ..	33.2	12.4	19.1	8.6	3.1	76.4
Slides talk .. ..	23.6	12.6	16.0	7.0	3.7	62.8
<i>Oral</i> .. ..	<i>11.7</i>	<i>3.9</i>	<i>6.8</i>	<i>3.1</i>	<i>1.4</i>	<i>26.8</i>
<b>TOTAL, ALL PICTURE MATERIAL.</b>						
<b>Film alone</b> .. ..	<b>36.9</b>	<b>14.9</b>	<b>18.5</b>	<b>9.0</b>	<b>2.0</b>	<b>81.5</b>
<b>Slides alone</b> .. ..	<b>17.2</b>	<b>12.7</b>	<b>15.8</b>	<b>9.6</b>	<b>1.9</b>	<b>57.4</b>
Film talk .. ..	37.7	13.0	25.5	10.4	4.0	90.6
Slides talk .. ..	29.8	13.4	20.6	8.8	4.9	77.5
<i>Oral</i> .. ..	<i>25.1</i>	<i>6.2</i>	<i>16.1</i>	<i>7.0</i>	<i>3.3</i>	<i>57.9</i>

in general; for example, a child describing the appearance of a volcano without being able to name it accordingly or understand how an eruption came about.<sup>22</sup> Spearman referred to adverse effects such as these as 'howlers' and explained their cause in the context of intelligence theory. What the report implies but fails to make explicit is that 'howlers' were most likely caused by using commercially produced films that were intended for recreational consumption by a diverse audience and not primarily aimed at school children in an educational context.

On the whole, there is a favourable commentary running through the report. While Spearman admitted that general statements indicate a child's ability to comprehend essential relations more than detailed descriptions do, he stressed that visualization of particular details coupled with guidance from a teacher was an important part of the process of understanding:

children are not always able to arrive at legitimate conclusions from (to them) highly complicated evidence. Unless things are pointed out explicitly, they may easily erect systems of relationships wrongly, and in consequence have their whole scheme rendered useless.<sup>23</sup>

He concluded that the cinema as a teaching aid could make visible details of complicated subjects and hence be a significant asset to school education. What the report reveals is an understanding of educational cinema confined to its use as a didactic tool supporting the transmission and memorization of factual knowledge. This was far from the more general notion the Cinema Commission represented in 1917, when it maintained that cinema widened children's horizons by making them familiar with a variety of topics, including current events, nature, industry, foreign countries and so forth.<sup>24</sup>

The Cinema Experiments Sub-Committee was headed by C.W. Crook, former president of the National Union of Teachers. It further included familiar names from the 1917 Commission, such as child psychologist C. W. Kimmins; head of the Cinematograph Exhibitors Association, A.E. Newbould; and the President of the British Board of Film Censors, T.P. O'Connor. The composition of the committee reveals that it was concerned with the more practical matters of realizing the idea of educational cinema for schools. Its goals were to find 'the best method of producing suitable films' and investigate 'the possibility of the cinema in cultivating aesthetic appreciation'.<sup>25</sup>

The report of the Psychological Sub-Committee is extensive, bulging with details about the practical execution of the experiment and various methods of analysis. The report of the Cinema Experiments Sub-Committee, on the other hand, seems short, inconclusive and indicative of the numerous obstacles that had to be overcome in an effort to bring cinema into schools. Not strictly connected to the terms of reference mentioned above, a variety of information on different projectors, films and regulations was 'collated by the subcommittee' in order to give educators a guide for using films in schools. The sub-committee mainly tested different projectors from national and international manufacturers as to their suitability for school use, determining that a school projector

had to be 'portable', 'cheap', 'easy to manipulate' and have a lantern attachment for slides.<sup>26</sup> Furthermore, it embarked on assembling a list of suitable educational films, but found that most of them 'had been prepared for public exhibition and were not *ad hoc* educational films'.<sup>27</sup> Such films included *Plant Life* and *Crocus* by Pathé Frères, *The Kew Gardens of Stockholm* by Swedish Biograph, *Fish and Fishing for Everybody* by Canada Fisheries Kineto, *Bees* by Visual Education Films Ltd. and approximately thirty more.<sup>28</sup> In the absence of films suiting the school curriculum, a problem educationists recurrently cited when justifying their reservations about using films, a further sub-committee was appointed. This was called the Educational Sub-Committee and headed by C.W. Crook. It also included James Marchant, J.W. Bunn, J.H. L. Ridley and T.W. Trought. The Sub-Committee planned to produce a number of films that could be used in connection with the syllabus, but the lack of financial support tempered ambitions. In the end, only one film was prepared: *A River Film*, which depicted the birth and subsequent functioning of a river, was to provide an example on how to construct a film text for school education.<sup>29</sup> Moreover, the Cinema Experiments Sub-Committee drew up two supplements of reports by ministers of education from other countries and further information about the films they used. Finally, a third appendix gave advice about fire safety regulations under the Cinematograph Act of 1909.<sup>30</sup> If the lack of films fitting the curriculum had not already put educators off pursuing this new teaching method, the requirement to apply for a cinema licence for each film exhibited would have made even the most enthusiastic teacher reconsider. In light of this, the lack of any enduring initiatives attempting to bring cinema into formal education at that time seems all the less surprising.

Taken together, the report of the Psychological Sub-Committee and the information collected by the Cinema Experiments Sub-Committee provided a handbook of educational cinema for interested teachers and educators in Britain: a handbook that for the first time underpinned scientifically film's value as a didactic tool for schools. The fact that the psychological inquiry constituted the largest part of the project suggests that a proper quantitative foundation was vital to justify the research. The statistical verification of the utility of cinema as a teaching aid was crucial because it defined a new, useful and legitimate role for cinema in society that was built on social scientific foundations and could run parallel to recreational cinema without replacing or interfering with it.

But, rather than generating immediate results, owing to the practical constraints outlined above, the 1925 Cinema Commission became significant only in the long run. Indeed, *The Film in National Life*, published in 1932, recognized the importance of both Cinema Commissions: 'Any summary [of earlier research] must begin with the [1917] enquiry by the NCPM. This was the first attempt by a responsible body to review the whole field'.<sup>31</sup> And: '*The Cinema in Education* (1925), recorded finally and authoritatively important basic research'.<sup>32</sup>



The praise was directed particularly towards the Psychological Sub-Committee, whose innovative methods provided a starting point for future scientific research into educational cinema. When *The Film in National Life* was published, some local inquiries had already taken off, for example, in London, Middlesex and Glasgow.<sup>33</sup> Among these, the Glasgow experiment stands out because it centred most explicitly on the use of films as a teaching aid in schools and confirmed in a local context the significance of using a quantitative methodology to verify results.

### **The Glasgow experiment: *The Film in the Classroom***

At the time of the publication of *The Cinema in Education* in 1925, Scottish education authorities were familiar with the debate on the potential use of films in school education. As one Glasgow *Herald* article suggests, the subject had in fact long been 'worn threadbare, driven to death, hackneyed, squeezed, and investigated from A to Z'.<sup>34</sup> Under the leadership of Charles Cleland, the Glasgow Education Authority had established a sub-committee to investigate the desirability of introducing cinematograph projectors into schools in 1919. The creation of the committee signified a heightened interest among Glasgow teachers in using films in schools and coincided with offers from film companies, which sent catalogues and organized local demonstrations of educational films.<sup>35</sup> One such event was organized for 1500 teachers and took place in May 1920 in the Picture House in Glasgow.<sup>36</sup> Since Glasgow's schools had little practical experience of using cinematography, advice was sought from Dalziel High School in Motherwell, which had been in the possession of a projector since 1917.<sup>37</sup> These initial investigations bore no fruit, however, as the Authority concluded that only under favourable circumstances would films be a useful addition to existing methods of presentation and stressed the lack of films fitting the existing syllabus.<sup>38</sup>

Apathy transformed into action during the later 1920s and early 1930s when interest in educational cinema flared up once more thanks to the 1925 Cinema Commission and similar inquiries as well as the availability of cheaper non-flammable 16mm films. But the start was made by film societies, not education authorities. The Edinburgh Film Guild, for instance, inaugurated Saturday morning matinees for children in the Scottish capital during the early 1930s. As Griffiths writes, the Edinburgh-based Educational Sight and Sound Association and the Educational Cinema Society in Glasgow (both founded in 1930–31) built on the Guild's success and likewise began to put on 'matinees specifically structured with the needs, as ... perceived, of children in mind'.<sup>39</sup> As a large part of the membership of the educational film societies was drawn from the local teaching communities, these events certainly addressed the 'needs' of teachers to engage with the persistent popularity of cinema-going among children and with the idea of visual education.<sup>40</sup>

A local investigation into children's cinema-going habits in Edinburgh and their impact on personal well-being and social behaviour took place during the early 1930s. *The Edinburgh Cinema Enquiry* was published in

1933 and demonstrated a renewed interest in the role cinema played in children's lives.<sup>41</sup> The decade also witnessed a noteworthy scheme at a school in the Gorbals, a lower-working-class area in Glasgow's south side that was the location of the city's first full-time cinema, the Wellington Palace.<sup>42</sup> The Gorbals School was equipped with a 'cinema machine ... for the purpose of teaching nature knowledge and geography by means of non-inflammable educational films' in 1931.<sup>43</sup> The 16mm silent film projector was installed by Ronald Jay, owner of Jays Film Service, a company formed in 1930 to screen educational films for schools, churches and other civic agencies.<sup>44</sup> Interestingly, the installation was not funded by Glasgow's Education Department but 'a joint committee of parents and teachers' that raised over £300 for this scheme.<sup>45</sup> The efforts and finances this small community invested into equipping its school (raising the equivalent of about £17,000 in today's currency) indicates that there was an increasing demand for visual education through film, which had yet to be met by the authorities.<sup>46</sup>

Although commercial cinemas at the time were already in the process of equipping for sound, this development did not filter down to educational initiatives such as the Gorbals School cinema. Despite the recognition of the 'immense scientific and educational value' of screening sound films in schools by MP James Welsh in connection with this local scheme,<sup>47</sup> the 1930s brought only the endorsement and wider introduction of silent films into Scottish schools. One of the main pillars on which that endorsement was built was the experiment carried out in Glasgow: between 1931 and 1933, Glasgow's Education Department (GED) pioneered Scotland's first social scientific experiment into the usefulness of film in schools under the leadership of Charles Cleland and R.M. Allardyce. Both men played a prominent role in the educational cinema movement of the 1930s. Allardyce wrote for *Sight and Sound* about the Scottish progress in this regard and has been described as the driving force behind the creation of the Scottish Film Council in 1934.<sup>48</sup> Cleland's track record is equally impressive. He not only established the Scottish Educational Cinema Society but also appears in one of Scotland's first 'talkies', *Sunny Days* (1931), a film produced by Ronald Jay for the GED to promote the Glasgow Necessitous Children's Holiday Camp Fund.<sup>49</sup> Cleland became chairman of the BFI in 1936.<sup>50</sup>

The Glasgow experiment was carried out over two years and published in a report titled *The Film in the Classroom* in 1933. The report presented the experiment as one of the first coordinated efforts 'to test scientifically the educational effect' of using films in schools. In doing so, Cleland and Allardyce distanced it from experiments undertaken in 'Middlesex and elsewhere' which tended to focus on 'the mass-presentation of general interest and background films'. The main purpose of the Glasgow project was to complement these general enquiries by conducting research that centred solely on 'using films as an integral part of the teacher's stock-in-trade'.<sup>51</sup>

The experiment took place in the post-primary course of five large Glasgow schools, involving children who were about 12 years of age. Consisting of film-assisted lessons and subsequent memory tests, the

experiment was conducted in a similar manner to that in *The Cinema in Education*. Nonetheless, *The Film in the Classroom* did not precisely emulate the second Cinema Commission's work. *The Scotsman* stressed that the Glasgow experiment was different in that it did not use 'commercial pictures to which the lessons had to be adapted but films especially prepared and adjusted to suit the lessons', thus tackling head-on one of the main obstacles that had prevented the progress of cinema for the classroom a decade earlier.<sup>52</sup> Perhaps this effort was made to achieve clearer results or to avoid the problems that Spearman had encountered during his work with commercially produced films, some of which had caused a considerable number of howlers.<sup>53</sup>

The choice of school subjects 'was determined by the supply of suitable films available' and geography was found to lend itself to the experimental treatment.<sup>54</sup> The use of specific films for school children was facilitated by the Scottish Educational Cinema Society and documentary filmmaker John Grierson, who helped in the editing of silent films supplied by the Empire Marketing Board, British Instructional Films and Pathescope Library to suit certain geographical topics such as 'canals' and 'sea ports'.<sup>55</sup> The Society had also started to produce a small number of films itself during that time and supplied the 9.5mm projector used during the first part of the experiment.<sup>56</sup> Despite my best efforts over the last five years, I have not found a copy of the full report of the experiment. The following sections are thus based on a summary by the Glasgow Education Department, and on articles by Barton and Cleland, neither of which contains the questionnaire or any detailed description of the methodology.

An initial inquiry was carried out between January and June 1932, establishing the ground for a more rigorous analysis the following year, which was to come up with concrete statistical figures. During the first stage of the experiment, each school selected two classes comprising thirty to forty-five pupils 'of approximately equal attainment'.<sup>57</sup> Both classes received oral, lantern and cinema lessons in geography once a week over a six-month period (January to June). The choice of teachers was based on their expertise in geography rather than their familiarity with cinema or love for film. In fact, as Cleland pointed out, 'we deliberately excluded the film enthusiast'.<sup>58</sup> The children's knowledge was then 'formally' tested with the help of a questionnaire before and after the summer vacation, 'the object of the second test being to see what permanence there was in the cinema impressions'.<sup>59</sup> Four out of five schools reported positive results in the early stages of the experiment:

Headmasters and those teachers actually engaged in the experiment ... were satisfied that, under better working conditions as regards time, and supply of films, the cinema can be of considerable use to them.<sup>60</sup>

The teaching staff pointed out 'that the pupils in the cinema class took a livelier interest in their Geography lesson ... and that they acquired a better understanding of it'.<sup>61</sup> In order for the Education Department to provide 'reliable data' and not rely on 'this impressionist verdict', the

experiment was repeated in the following year, when 'cinema specialists made way for the statistical experts'.<sup>62</sup>

During the second stage of the experiment, only oral lessons (without any other visual aids) were compared with cinema lessons. Three classes instead of two were examined in order to 'control' variations. Class A and B received, in turn, one cinema and one oral lesson each week, while the control group only received oral lessons. An initial test was carried out after forty-eight hours plus a 'retentivity' test at the end of the teaching cycle, which had been shortened to eight weeks. The goal of the more rigorous second stage was to find a so-called 'cinema factor' – a number that would indicate the 'average gain factor for each lesson' taught using the cinematograph.<sup>63</sup> The final report contains a table listing numerical 'cinema factors' for a variety of geographical topics (Figure 2).

Cinema factors above 1 indicated that tuition with the aid of film was beneficial and the table demonstrates that this could be achieved across all geographical subjects. The factors for test 5 and 6 indicated that the topic Sea Ports and Canals benefited in particular from the addition of film to the lesson as these achieved high results in three out of five schools. The report stressed, however, that positive results could not be achieved with general interest films screened in cinemas. For the use of films to be successful in the realm of the school it was important:

- a. That the films are really teaching-films, prepared for the purpose and not mere extracts from longer films of adventure or general interest. ...
- b. That films intended to be an accompaniment to a lesson, and not to be a lesson by themselves, are standardised as regards length.<sup>64</sup>

This statement reiterated and strengthened the conclusions of the 1925 Commission that cinema lessons were most effective when specifically prepared for the curriculum and delivered by a teacher talking about the pictures in order to aid children's understanding of the relevant topic.

The test results of School III were above average in all topics, which suggested that positive cinema factors derived not just from the display of teaching films but also from the technique of the teacher. Accordingly, the report identified this as an important area to build on in the future,

CINEMA FACTORS						
School	Classes	Tests 1 and 2 Canada, Australia	Tests 3 and 4 Arctic, Alaska	Tests 5 and 6 Seaports, Canals	Tests 7 and 8 Cocoa, Rice	Mean Factors for Schools
I.	A and B	.876	1.016	.952	1.042	.969
II.	A and B	.877	.934	1.033	.934	.943
III.	A and B	1.081	1.052	1.036	1.144	1.077
IV.	A and B	.987	.907	1.014	.888	.947
V.	A and B	.848	.925	.993	.948	.927
<b>Mean Factors for tests</b>		.930	.965	1.005	.987	—

Figure 2. Statistical table listing 'cinema factors'. Source: GED, *The Film in the Classroom*, 9.

recommending 'that a film-teaching technique is developed and scrupulously maintained by the teacher'.<sup>65</sup> The need for a teacher to present a film talk using a particular technique, as opposed to letting a film speak for itself, indicates a preference for silent over sound films and might be one of the reasons why the introduction of film as an audio-visual teaching aid was delayed well into the 1940s.<sup>66</sup>

Like the 1925 Cinema Commission, *The Film in the Classroom* was not merely concerned with the transfer of knowledge through film exhibition, but also addressed questions about children's memory of the material over a long period of time. To illustrate the results, the report featured a table dealing exclusively with so-called retentivity factors (Figure 3).

Figure 3 shows that the average test results for film-assisted lessons increased for all schools after two months which indicated 'in every case a gain for the pupils taught with the cinema'.<sup>67</sup> These results constituted important evidence supporting and justifying the further development of visual education through film.

Overall, the report concluded:

- (1) In certain lessons and in the hands of certain teachers the cinema has been used with advantage.
- (2) From the consistency of the positive results obtained in one school there seems to be a particular technique in cinema presentation, the investigation of which is necessary ...
- (3) Some types of lessons lend themselves more than others to cinema illustration and instruction.
- (4) Pupils taught with the cinema tend to retain what they have learned better than those taught without it.<sup>68</sup>

For GED, the primary educational value of film lay in its facility in aiding the transfer and memorization of factual knowledge. This was measured by testing schoolchildren's responses to film-assisted lessons. The attempt to quantify this facility with a number – the cinema or the retentivity factor – indicates a demand among educationists to achieve tangible results that would justify the introduction of films in schools, as well as the continuing influence of Spearman's factor analysis. Furthermore, the social-scientific approach present in *The Film in the Classroom* resembled to some extent that of *The Edinburgh Cinema Enquiry*, which similarly presented its results in tables that were 'discussed in a measured way'.<sup>69</sup>

RETENTIVITY FACTORS			
School	Average Factors for weekly test	Factors for Retentivity Test	Increase of Factor after two months
I.	.969	.980	.012
II.	.943	.950	.007
III.	1.077	1.235	.158
IV.	.947	1.030	.082
V.	.927	.953	.028

Figure 3. Statistical table listing 'retentivity factors'. Source: GED, *The Film in the Classroom*, 9.

The report did more than offer a prospect of what cinema in the classroom could achieve. It also reassured the remaining sceptics that this delineation made film a safe medium that, in the realm of the school, would not compromise children's moral or physical welfare:

Films on suitable subjects and satisfying the above conditions can be introduced as classroom aids without any interruption of ordinary school routine and without causing any strains, physical or mental, to the pupils.<sup>70</sup>

Finding a place for film in the school was not insignificant because in this way the medium was stripped of the dangers the commercial picture house represented. Using and advocating the school as a new exhibition context, therefore, contributed not only to the fledging of the educational film movement of the 1930s but also helped to place the control over some film content in the hands of civic authorities and perhaps even alleviate, to some extent, concerns about the negative impact of cinema on children that had been extant since the 1910s.<sup>71</sup>

The subsequent years witnessed the large-scale introduction of cinematograph projectors and films into Scottish schools. This was facilitated by the Scottish Educational Film Association, a merger of the two educational film societies mentioned above, founded in 1935, and the Scottish Film Council. The success of these bodies in 'command[ing] the respect of commercial companies and convinc[ing] the many sceptics inside the school' was crowned with the establishment of the Scottish Central Film Library in 1939.<sup>72</sup> This library was generously funded by the Carnegie Trust with a grant of £5000 and lent many of its films to schools and other educational organizations in Scotland.<sup>73</sup> By 1950 the library had grown to be the largest distribution library in Europe 'in terms of overall circulation of educational films', symbolizing Scotland's prominent position within the educational cinema movement at the time.<sup>74</sup>

This widespread adoption of showing films in school was, however, largely limited to silent projection. As Griffiths points out, 'only fifty sound projectors were in use across the country by 1941'.<sup>75</sup> One reason for this was the cost of installing and maintaining sound equipment, the other the pedagogical argument that silent films were more effective as a teaching aid. Accordingly, educational films had the most didactic impact when they were part of a lesson led by the teacher and were less useful when constituting a lesson in and by themselves, a position echoed in *The Film in the Classroom* report. Sound films would have compromised this didactic approach by taking over the role of the teacher and their introduction into schools was, hence, opposed by key agencies such as the Scottish Film Council.<sup>76</sup> This meant that Scottish schools were unable to access a whole range of educational films produced at the time. Thus, as 'the time had not yet come for schools to expend large sums on [sound] equipment',<sup>77</sup> it was down to individual companies such as Jays Film Service to fill the gap of supplying talkies to schools. For a 'moderate' fee a school could hire Jay's educational films together with the appropriate equipment for sound projection.<sup>78</sup> The Scottish Film Council's reluctance to introduce

'talkies' into schools only shifted after the Second World War when repeated inquiries confirmed the merit of screening sound films in schools.<sup>79</sup> How far schools made use of offers by private companies in the meantime poses an interesting question requiring further research that goes beyond the limitations of this article.

### Conclusion

During the 1920s and early 1930s educational cinema was defined by its usefulness for school instruction. As programming in commercial cinemas centred increasingly on the long feature film, pushing the educational film to the margins, the development and demarcation of educational cinema fell to agencies that held a specific stake in formal education. These agencies endorsed a particular version of educational cinema. Driven by the demands of school teaching in particular, the assessment of cinema's value for the classroom became a dominant goal that overshadowed broader notions of visual education in the cinema. The debate focused on the questions of how effectively film could convey factual knowledge and help children to retain it. *The Cinema in Education* was the first British investigation that tried to answer these questions by using statistical methods and the Glasgow experiment confirmed in a local context the significance of this methodology. In particular, the identification of so-called cinema and retentivity factors in the latter experiment confirmed the idea that moving images had a profound impact on children, especially when accompanied by guidance from a trained teacher. Through the experiments, the idea of educational cinema changed from being a mere blend of cinematic genres that included general-interest films such as nature studies, travelogues, newsreels, local topicals and films based on books from respected authors, to a film category that was defined according to its educational impact as a teaching aid in the school. Crucially, this discourse initiated basic arguments on which later movements promoting screen education in Britain would build.

The aspirations visible in *The Cinema in Education* and *The Film in the Classroom*, then, were part of an emerging movement that tried to create an alternative civic film culture which focused on the educational and cultural values, and less on the entertainment value, of moving pictures. Nevertheless, the institutionalization of educational cinema had to await the formation of the Commission on Cultural and Educational Films before a civic film culture was seriously considered by British authorities and promoted by the BFI and the Scottish Film Council. Scottish institutions and promoters of educational cinema, such as Allardyce and Cleland, played a central role in the film education movement of the 1930s, confirming the significance of *The Film in the Classroom* in the light of the broader national discourse on cinema's social role in Britain. Uncertainty about what role films should play in schools continued throughout the 1930s. This is reflected in the reluctance to endorse and fund equipment for showing sound films. Consequently, even though the production of

suitable teaching films increased thanks to the efforts of newly formed agencies such as the Scottish Film Council, schools were unable to access all of them and had to rely on private exhibitors to provide and show educational 'talkies'. Such shows would probably have replaced rather than accompanied lessons fitting the curriculum. Therefore, the exhibition of silent films remained the preferred and officially sanctioned version of educational cinema in schools throughout the 1930s.

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### Notes

1. Macdonald, 'The vanguard of film appreciation'.
2. Horne, 'A History Long Overdue'.
3. Jernudd, 'Educational Cinema and Censorship in Sweden, 1911–1921', 157–8.
4. Garner, 'Seeing Is Knowing: The Educational Cinema Movement in France, 1910–1945', 67–107.
5. Low, *The History of the British Film, 1929–1939*, 7–10.
6. Bolas, *Screen Education*, 11–37.
7. Griffiths, *The Cinema and Cinema-Going in Scotland*, 235–6.
8. Thompson, *Exporting Entertainment*, 82–4.
9. Vélez-Serna, 'Film Distribution in Scotland before 1918', 219–46.
10. Hammond, *The Big Show*, 82.
11. Commission on Educational and Cultural Films, *The Film in National Life*, 140.
12. Bolas, *Screen Education*, 11–37; Griffiths, *Cinema and Cinema-Going*, 227.
13. Such as *The Declining Birth Rate: Its Causes and Effects* (1911); *Problems of Population and Parenthood* (1920); *Prevention of Venereal Disease* (1921).
14. National Council of Public Morals (NCPM), *The Cinema in Education*, 16.
15. NCPM, *The Cinema: Its Present Position and Future Possibilities*.
16. NCPM, *The Cinema in Education*, 17–18.
17. *Oxford Dictionary of National Biography*, s.v. 'Spearman, Charles Edward (1863–1945)'.
18. *Ibid.*, 18.
19. *Ibid.*, 28.
20. *Ibid.*, 27.
21. *Ibid.*, 91.
22. *Ibid.*, 60–7.
23. *Ibid.*, 96.
24. National Council of Public Morals, *The Cinema: Its Present Position and Future Possibilities*.
25. *Ibid.*, 18.
26. NCPM, *The Cinema in Education*, 131–51. Models tested included projectors by Pathéscope, the 'Acme' portable projector by Jury's Imperial Pictures Ltd., The Kinoscope by British Kinoscope Ltd., the Oxford portable projector, the Petra by the British Petra Company, the De Vry Portable Cinema Projector, the Kinereflex film projector, Kinox by Krupp Ernemann and others.
27. *Ibid.*, 152.
28. *Ibid.*, 153–4.
29. The report does not state in what year this film was produced.
30. *Ibid.*, 155–9.
31. Commission on Educational and Cultural Films, *The Film in National Life*, 4.



32. Ibid., 5.
33. Ibid., 7–8.
34. 'Educating the Educationist', *Herald* (Glasgow), July 6, 1923.
35. Glasgow Education Authority, Minutes, 5 June 1919, 58–9.
36. Glasgow Education Authority, Minutes, 23 November 1920, 661–3.
37. Griffiths, *The Cinema and Cinema-Going*, 232.
38. Ibid., 235.
39. Ibid., 233.
40. 'Films for the Schoolroom', *Herald* (Glasgow), May 18, 1931.
41. For a discussion of the enquiry see Smith, *Children, Cinema and Censorship*, 91–3.
42. 'Wellington Palace, Glasgow', entry in the *Early Cinema in Scotland* website. <https://earlycinema.gla.ac.uk/venue/641/> (accessed October 22, 2019).
43. 'Glasgow School's Lead', *Herald* (Glasgow), May 28, 1931.
44. McBain, Biography of Ronald L. Jay. Available at: National Library of Scotland, Moving Image Archive: <https://movingimage.nls.uk/search?personality=10020> (accessed October 22, 2019).
45. 'Glasgow School's Lead', *Herald* (Glasgow), May 28, 1931.
46. Trevor Griffiths, e-mail message to author, January 9, 2015.
47. 'Glasgow School's Lead', *Herald* (Glasgow), May 28, 1931.
48. Selfe, 'Encouraging National Film Culture', 27; Oakley, 'How the Scottish Film Council began', 7.
49. McBain, Biography of Ronald L. Jay.
50. Oakley, 'How the Scottish Film Council began', 11.
51. Glasgow Education Department (GED), *Film in the Classroom*, 4.
52. 'The Cinema: Films in the Classroom', *Scotsman* (Edinburgh), April 5, 1932.
53. NCPM, *The Cinema in Education*, 60–7.
54. GED, *Film in the Classroom*, 4.
55. 'The Cinema: Films in the Classroom', *Scotsman* (Edinburgh), April 5, 1932; Cleland, 'Cinema Lessons', 72.
56. GED, *Film in the Classroom*, 4; Cleland, 'Cinema Lessons', 72.
57. GED, *Film in the Classroom*, 4; Barton, 'Glasgow Experiment' 126.
58. Cleland, 'Cinema Lessons', 72.
59. 'Cinema as an Aid to Education', *Herald* (Glasgow), November 4, 1932.
60. GED, *Film in the Classroom*, 11.
61. Ibid., 10.
62. Ibid., 6 and 10.
63. Ibid., 8.
64. Ibid., 11.
65. Ibid.
66. Griffiths, *The Cinema and Cinema-Going*, 236–7.
67. GED, *Film in the Classroom*, 10.
68. Ibid., 10–11.
69. Smith, *Children, Cinema and Censorship*, 91.
70. GED, *Film in the Classroom*, 10–11.
71. Bohlmann, Regulating and Mediating the Social Role of Cinema, 115–39.
72. Frizzell, 'The Scottish Educational Film Association', 18.
73. Oakley, 'How the Scottish Film Council began', 12.
74. Griffiths, *The Cinema and Cinema-Going*, 236; Nowell-Smith, 'Foundation and Early Years', 23: The library's status as distribution centre was unique and a contrast to the National Film Library in London, which functioned mainly as a repository.
75. Griffiths, *The Cinema and Cinema-Going*, 236.
76. Ibid.
77. 'The Cinema in School', *Scottish Educational Journal*, November 30, 1934.
78. Jays Film Service, 'A Talkie Show', April 1934.
79. Griffiths, *The Cinema and Cinema-Going*, 236.

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