

# *Evaluating Media Education: a Quantitative Approach*

Hans Martens, Visual Studies & Media Culture, University of Antwerp, Belgium

---

Key words: film education, media audiences, quantitative methods, learning outcomes

## **Abstract**

In this research report, we build a case for quantitative methods as a tool to analyse media education. Within the UK in particular, discussions about media teaching and media learning are mainly informed by qualitative, interpretive classroom-based research. However, quantitative measurements provide the opportunity to more transparently assess the process and the outcomes of media education. Moreover, statistical techniques help to make inferences beyond a limited number of children or adolescents. To illustrate this point, we share parts of an ongoing research project on film education. In the first half of 2009 we conducted a large scale (N=1048) pre-test post-test field experiment. Our preliminary analyses indicate that media literacy scholars should more clearly distinguish between different types of explanatory and outcome variables.

---

## **Evaluating media education: a quantitative approach<sup>1</sup>**

One way to analyse the confusing realities of classroom practice is through interpretive, qualitative research. Within the UK in particular, academic discussions about media teaching and media learning are mainly informed by classroom-based research, often conducted in collaboration with teachers themselves (see Buckingham, 1996, 1990, 1998b; Buckingham & Sefton-Green, 1994; Burn & Durran, 2007).

In line with cultural studies' focus on media audiences, these scholars emphasise the importance of paying close attention to the complex ways in which children and adolescents make judgments about media and how they use these media to form personal and social identities (Buckingham, 1998a, 2003). This approach has firmly dispelled any

---

1 Thanks to David Cooper Moore and an anonymous reviewer for useful comments on an earlier draft of the manuscript.

simplistic notion of media education as a means to protect vulnerable children and adolescents from the negative influence of all-powerful media. Yet for all its theoretical nuance, interpretive approaches are not without methodological weaknesses. For instance, because of the large number of analytical decisions involved, qualitative researchers have difficulties giving an objective account of their protocol or their analysis process. Moreover, contextual richness often comes at the cost of any basis to generalise beyond the details of specific media literacy practices (Gomm, 2008; Potter, 1996). By contrast, quantitative methods provide an opportunity to transparently measure and compare the processes and the outcomes of media education across individual cases. At the same time, statistical techniques help to test theoretical hypotheses, rule out competing explanations, and detect new relationships (for some recent empirical examples, see Martens, 2010).

To illustrate this point, we share parts of an ongoing quantitative research project on film education. *Lesson in the Dark* is a non-profit organization that aims to help young people to appreciate ‘non-mainstream’ film.<sup>2</sup> Every year, about 80,000 pupils from Flemish primary (age 6 to 12) and secondary (age 12 to 18) education –roughly ten percent of the total Flemish student population – participate in a *Lesson in the Dark* film activity. Participants first watch a film together in a local cinema. Afterwards, teachers discuss key concepts such as film production, film language, and film audiences to provide insight into film as a multifaceted art form. We will first detail our research instrument. Subsequently, we elaborate on some theoretical implications of our preliminary data analysis.

## Research instrument

In the first half of 2009 we conducted a pre-test post-test field experiment in the Flemish community (Belgium). Though a true random sample was impossible, we sampled five large and diverse schools (N=1048) in an attempt to achieve a maximum of variance along our theoretical dimensions of interest (Gerring, 2007).

Respondents completed a pre-test survey questionnaire the week before the film activity. During the film activity, they first watched one of five films, ranging from ‘less’ to ‘more’ mainstream according to the films’ Belgian box office performance. After the screening, the majority of participating teachers analysed the film in class using the *Lessons in the Dark* teaching materials. Approximately 1 in 3 teachers did not use these materials. Teacher participation adds an interesting dimension to the study design; some pupils were

---

2 Obviously, this is quite a specific aim. Nevertheless, within the European context, media education has often been (and continues to be) closely related to this type of cultural issues (Bolas, 2009; European Commission, 2009).

merely exposed to the film, while others (in addition) participated in a film analysis course. Because this decision was made by the teacher and not by the students, both groups remain comparable, especially when we control for demographic variables. Because media education cannot be reduced to a merely rational phenomenon (Buckingham, 1998, 2003), we differentiate between three types of learning outcomes. The first, cognitive learning ('what do pupils learn?') was measured using an 11-item recall test (Kearney & Beatty, 1994). These questions included recall of information from the film such as 'What was the main topic of the film?' and 'What were the three most important stylistic characteristics of the film?' The second learning outcome, affective learning ('will pupils generalise what they learn beyond the classroom?') was measured using a 9-item, 5-point differential scale (Kearney, 1994), which asked students to evaluate the film activity and the likelihood of them watching this type of film again. The third learning outcome, *attitude change* (Eagly & Chaiken, 1993), was measured by asking respondents on a 3-item, 5-point differential scale to evaluate the films they see in their spare time and those they see in a school context. To map any short-term changes in how pupils evaluate a film's quality, we asked them, on a 5-point scale, how important they find the following characteristics: an original film style, a well-crafted scenario, strong dialogues, complex characters, and a socially relevant topic.

As quantitative researchers do, we tried to understand these outcomes by building statistical models with a number of explanatory variables. From a theoretical point of view, we expected to better understand what works and what does not work in media education by clearly distinguishing between instructional (film analysis or not, mainstream or non-mainstream), social (gender, age, educational background) and individual (personal relevance) variables (see also Martens, 2010).

## Data analyses

There are several ways to learn from these survey data. Most simply, we can compare some of the pre-test and post-test attitude measurements.

For instance, our pre-test data reveal that respondents evaluate the films they see in their spare time ( $M=12.13$ ,  $SE=.05$ ) significantly better than the films they see at school ( $M=8.47$ ,  $SE=.06$ ),  $t(1009)=45.77$ ,  $p<.001$ . Surprisingly, this gap slightly increases after the film educational activity ( $M=12.19$ ,  $SE=.06$  versus  $M=8.46$ ,  $SE=.09$ ),  $t(921)=33.10$ ,  $p<.001$ . The cognitive standard pupils use to evaluate film remains about the same before ( $M=17.50$ ,  $SE=.08$ ) and after ( $M=17.45$ ,  $SE=.09$ ) the film educational activity,  $t(867)=-.73$ ,  $p=.47$ . Also, teachers are perceived to be much less credible when teaching about film ( $M=18.35$ ,  $SE=.18$ ) compared to their general teaching credibility ( $M=19.89$ ,  $SE=.16$ ),  $t(593)=9.93$ ,  $p<.001$ . In sum, these results give a rather disappointing view of the potential of a one-time film

educational activity; on average, it appears that the activity did not have a significant impact on learning or attitudes.

However, it would be ill-advised to stop here. In this project, we constructed and measured a variety of explanatory and outcome variables. Thus, we also looked for more complex patterns within our dataset. Table 1 presents the results of two multiple regressions run separately for cognitive learning and affective learning. Because of the large sample size, we should not be too surprised about the many significant results. A more straightforward interpretation is offered by our standardised regression coefficients. These coefficients enable us to compare the magnitudes of effects of variables in different units (Cohen et al., 2003).

<b>Table 1 Predictors of media learning</b>		
	Cognitive Learning	Affective Learning
<b>Instructional differences</b>	–	–
Film analysis	.33**	.01
Mainstream film	.22**	.18**
<b>Social differences</b>		
Male	-.11*	-.07*
Age	-.12*	.13**
General or arts education	.27**	.01
<b>Individual differences</b>		
Personal relevance	.14**	.59**
	$R = 17\%^{**}$	$R = 47\%^{**}$
Note: Entries are standardized regression coefficients. * $p < .01$ ; ** $p < .001$ .		

Table 1 indicates that cognitive learning is most positively influenced by instructional differences and educational form. Pupils who analysed the film in class scored significantly better on the cognitive learning test than those who did not. The same holds for those who have seen a 'more-mainstream' film. Also, pupils in general and arts education tend to do better here than pupils in technical or vocational education. Affective learning, by contrast, is overwhelmingly predicted by individual differences. True, the type of film is again of some importance. Still, students' willingness to generalise what they learn beyond the classroom is far more dependent on perceived personal relevance. Analysing the film in class and educational form appear to have no significant impact on pupils' affect toward media learning.

## Discussion

Our data confirms what many have argued before: young people are not easily impressed by media educational activities that do not sufficiently take into account their personal experiences. Therefore, it seems good practice to start close to mainstream media culture. Nonetheless, a variety of individual and social differences make it difficult to design a one-size-fits-all approach.

Within this context, a clear distinction should be made between cognitive and affective learning outcomes. If cognitive learning is of primary interest, media educators should mainly focus on how to design their instructional methods. Clearly, pupils need conceptual guidance. Moreover, pupils seem more willing or able to learn about the media they like or know. Even then, it should be no surprise that pupils in academically-oriented forms often score better on standardised assessments. On the other hand, if affective learning is the most important goal, media educators will have to overcome many individual barriers that are too complex to be simply reduced to age, gender, or educational background. In other words, teachers need to be very attentive to young people's existing knowledge and preferences.

## References

- Bolas, T., 2009. *Screen Education: From Film Appreciation to Media Studies*. Bristol: Intellect Books.
- Buckingham, D., 1996. 'Critical pedagogy and media education: a theory in search of a practice'. In: *Journal of Curriculum Studies*, 28(6), 627-650.
- Buckingham, D., 1998a. 'Media education in the UK: moving beyond protectionism'. In: *The Journal of Communication*, 48(1), 33-43.
- Buckingham, D., 2003. *Media education. Literacy, learning and contemporary culture*. Cambridge: Polity Press.
- Buckingham, D., ed, 1990. *Watching media learning: Making sense of media education*. London: Falmer.
- Buckingham, D., ed, 1998b. *Teaching Popular Culture: Beyond Radical Pedagogy*. London: UCL Press Limited.
- Buckingham, D., & Sefton-Green, J., 1994. *Cultural studies goes to school*. London: Taylor & Francis.
- Burn, A., & Durran, J., 2007. *Media literacy in schools. Practice, production and progression*. London: Paul Chapman Publishing.
- C(2009) 6464. *Final Commission recommendation on media literacy in the digital environment*

- for a more competitive audiovisual and content industry and inclusive knowledge society.*
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S., 2003. *Applied Multiple Regression/Correlation Analyses for the Behavioral Sciences. Third Edition.* Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Eagly, A. H., & Chaiken, S., 1993. *The Psychology of Attitudes:* Wadsworth Publishing.
- Gerring, J., 2007. *Case study research: principles and practices.* Cambridge: Cambridge University Press.
- Gomm, R., 2008. *Social Research Methodology. A Critical Introduction. Second Edition.* Basingstoke: Palgrave Macmillan.
- Kearney, P., 1994. 'Affective Learning.' In: R. B. Rubin, P. Palmgreen & H. E. Sypher, eds, *Measures of instructional communication* (pp. 81-85). New York: The Guilford Press.
- Kearney, P., & Beatty, M. J., 1994. 'Measures of Instructional Communication.' In: R. B. Rubin, P. Palmgreen & H. E. Sypher, eds, *Communication Research Measures: A Sourcebook* (pp. 7-11). Mahwah, NJ: Routledge.
- Martens, H., 2010. 'Evaluating Media Literacy Education: Concepts, Theories and Future Directions.' In: *Journal of Media Literacy Education*, 2(1), 1-22.
- Potter, W. J., 1996. *An analysis of thinking and research about qualitative methods.* Mahwah: Lawrence Erlbaum Associates.