

The Whipple 'Time-clock' Experiment: Measurement of Visitor Engagement in a Small Museum

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Abstract

This paper reports the innovative approach to visitor research that has been created at the Whipple Museum, Cambridge. The Director of this small museum has designed an innovative method –the Time-clock- for getting visitor feedback regarding the museum and its exhibits. The method is simple to install and requires no additional staff. The depth of comments has greatly improved during the trial period, and new information about visit duration has been discovered.

Keywords

Whipple Museum, visitor satisfaction, Time-clock experiment, qualitative research

Museums, particularly those that receive funding from government bodies, are under increasing pressure to demonstrate that they deliver 'value for money'. Performance indicators, especially those that are quantified, are regarded as a useful means of judging effectiveness. In today's climate, museums are required to provide quantified data reporting on a variety of performance indicators intended to relate to the scale and/or success of a museum or gallery's activities, normally on an annual basis.

The Arts and Humanities Research Council, using Higher Education Funding Council of England revenues, offers support to some university-based museums in England. The AHRC is currently accessing applications for its next funding round, for 2006-2009. In their application form, and the associated guidance notes for applicants, they acknowledge some of the difficulties involved in collecting and reporting such data, explaining that:

To establish a more robust and consistent data set about and for the university museums sector the AHRC has refined its requirement for performance indicators for the scheme. It is hoped that the definitions now provided will reduce ambiguity about how to interpret the indicators, bringing greater transparency and usefulness to the returns. They have been designed to be consistent with MLA requirements. (Arts and Humanities Research Council 2005)

The AHRC states that it 'recognise[s] that the scale of museums supported through the core scheme varies so that different levels of performance monitoring will be appropriate to museums of different sizes'. Nevertheless, all museums are requested to supply (and if successful, to regularly provide) information to complete the Key Performance Indicators (KPIs)'.

A very popular Performance Indicator is that normally referred to as 'visitor' numbers. However, funding bodies, like the AHRC, are getting more sophisticated in their counting of visitors. In the current funding exercise, they are asking museums to distinguish what they refer to as the 'usage' of museums by 'Number of visitors' and 'number of visits'. That is, 'number of visitors' is what they refer to as 'the number of unique people coming to visit the museum'; in other words, 'if a visitor returns a number of times you would only record that visitor only once'. And 'number of visits', 'is the number of discrete visits (activities/trips) made to the museum'. So, 'if a single visitor returned more than once you would count the total number of times that the visitor had visited'.

While this distinction between unique visitors and number of visitors would provide useful and interesting information for many institutions, not only museums, in the museum/gallery context this is an extremely difficult (that is, expensive) set of numbers to count, particularly if the museum/gallery does not charge admission. Visitor figures as such are somewhat difficult to count under the best of circumstances; some major museums are able only to provide estimates. Many museums use automated counting devices at the main entrance; those with a smaller budget may simply ask a warden or gallery attendant to use a 'clicker' to count visitors.

The Whipple Museum of the History of Science is one of the museums belonging to the University of Cambridge (England). It holds an internationally renowned collection of scientific instruments, models and images dating from the Middle Ages to the present; the collection was officially 'Designated' as pre-eminent by the Secretary of State for Culture, Media and Sport in 1997. The Whipple Museum actively supports and contributes to teaching and research within the University, especially within its home department, the Department of History and Philosophy of Science. The Whipple has been the grateful recipient of so-called 'core' funding (that provided through the AHRC), since the time such funding support first was made available to university museums in England.

In common with many such small museums that receive grants from governmental funding bodies, the Whipple is required to meet various performance indicators, and to produce evidence of annual visitor numbers, provision of public access, and engagement with various target audiences. Previously this museum has used the conventional strategies for counting visitors ('real' gallery visitors and 'virtual' web-site visitors), and has conducted a number of research studies (including focus groups, questionnaires, visitor comment books), which probe the interests of visitors and their satisfaction with the museum experience at the Whipple. In their application for 'core' funding in 2001, the Whipple suggested that the measure of the Museum's importance and use is, on the one hand, seemingly straightforward. For example, we are able to provide and compare visitor figures, and we would be able to present and compare the numbers of objects previously on display and those placed on display in our refurbished galleries. But the Whipple staff noted that while such calculations are [relatively] easy to make, they represent rather crude measures of the ways in which our visitors engage with our Designated collection. With that view in mind, the Whipple explained that they had begun to implement a variety of evaluative strategies in order to gain a more rounded understanding of our visitors and users and of the ways in which the Whipple can better serve their needs. They emphasised that they 'believe that more advanced evaluation methods would provide the most valuable indications of user needs being properly addressed'; they recognised that such 'advanced evaluation methods' would require considerable staff time.

With the aim of implementing 'advanced evaluation methods', to gain a 'more rounded understanding of visitors and users', in 2003 the Whipple introduced a new method of collecting primary data from visitors. Currently, when visitors enter the museum, they are invited to

“punch in” to a time clock, and to record their thoughts on a comment card as they go around the exhibits. When they “punch out” and leave their comment card, they are rewarded with a free postcard as a souvenir of their visit.



1. The Main Gallery

This relatively simple but extremely innovative concept in visitor research has produced a stream of rich information about the nature of the museum visitor experience--both quantitative and qualitative.

The Whipple's clocking-in project was designed and carried out with three clear aims in mind:

1. To gather and assess quantitative data on the duration of visits to the Museum; and
2. To gather and assess quantitative data on the demographics of visitors, namely age group and gender; and
3. To collect and assess qualitative feedback on the Museum via a comment-card system incorporated into the clocking-in cards.

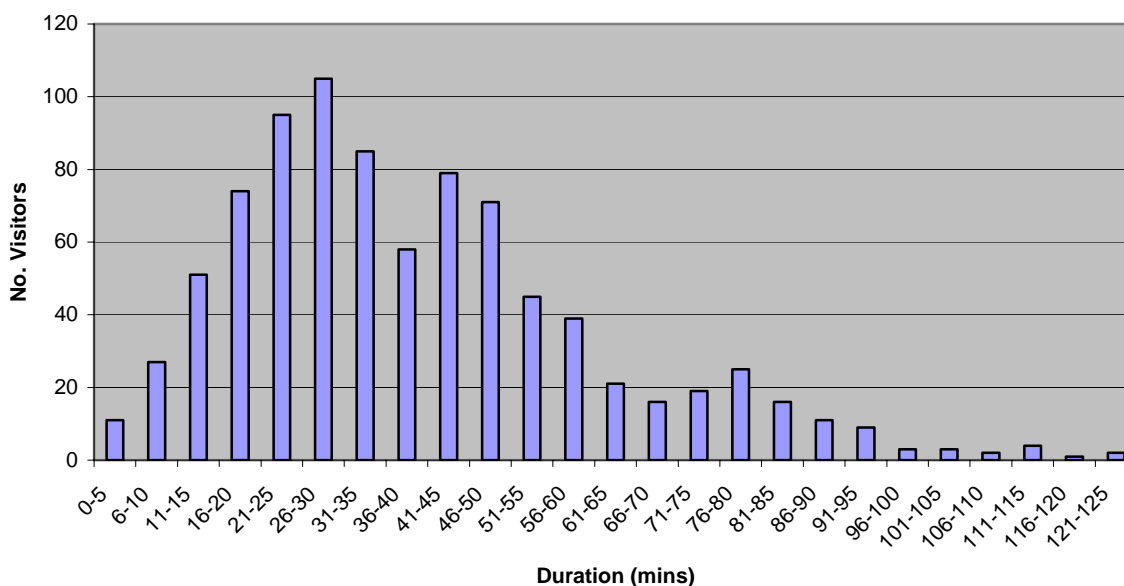
The quantitative data collected via the cards was intended to give the Whipple's staff a measure of the duration of visits to the Museum; it was hoped that 'duration of visit' might indicate the degree of 'engagement' by visitors. As a second key aim, the clocking-in project offered the opportunity to incorporate visitor comments onto the clocking-in cards. Significantly, it also gave staff an opportunity to link the comment data to some basic demographics regarding age and gender.

The results of this research have been interesting from many respects, not least of which is the insight it gives into how much time visitors spend in the museum, and how they spend it, as well as their thoughts and impressions. The importance of the data is both quantitative (providing visitor numbers, broken down by gender and age group (adult/under 16) and significantly, length of visit) and qualitative, providing a record of visitors' impressions.

**Table 1:
Summary of results from Phase One**

	No. visits to Museum*	No. respondents	% uptake	Average Duration	No. comments	% respondents commented
Males	840	383	46%	39 mins	229	60%
Females	677	328	48%	39 mins	179	55%
Children	-	161	-	38 mins	86	53%
Total	1517	872	57%	39 mins	494	57%

Visit Durations



Whipple staff recognise the data related to duration of visit can be used to map trends over time, which could then be offered as another performance indicator, in much the same way as basic visitor figures. 'Length of duration of visit' collected over long periods might well show changes inspired by such things as improvements to the Museum and the opening of new galleries and exhibitions. In this way, museums might be able to say, for example, that a funded project contributed to a percentage rise in the duration of visits during the relevant period.

An unexpected outcome of the project has been the realisation that the comment cards offered a 'special' opportunity to visitors to express themselves. Prior to the introduction of the clocking-in experiment, the Whipple already had a number visitor books (one in each of three galleries), openly on display, in which members of the public can offer comments on their visit and leave their name and/or address. On the basis of a comparison of the clocking-in comment cards vs.

the visitor books to date, it appears that the comment cards encourage more people to leave comments than do the visitor books. Also, and perhaps significantly, comments left on the cards seem to be more individual than those left in the books.

Table 2

Comment type	Comments Book Jan – May 2003		Clocking-in Comments Jan – May 2004	
	Number	Percentage	Number	Percentage
General positive	70	73%	404	82%
General negative	0	0	9	2%
Specific positive	7	7%	107	22%
Specific negative	2	2%	23	5%
Display positive	4	4%	45	9%
Display negative	1	1%	12	2%
Collection	1	1%	44	9%
Object suggestion	1	1%	6	1%
Personal remark	2	2%	28	6%
Evidence of learning	6	6%	31	6%
Add information	0	0	19	4%
Time constraint	0	0	46	9%
Other	1	1%	34	7%
Total No. Comments	96		494	

The working hypothesis is that because the comments cards offer a more private route of communicating with the Museum, they may encourage a more critical type of comment than those left on public display for all to see.



The mechanism for obtaining the valuable data collected in the Whipple's clocking-in experiment is innovative and directly engages with visitors. Visitors are offered an open-ended 'hands-on' opportunity to share their views on their visit. The first surprising result is that visitors are keen to participate, and offer much more detailed comments on their cards than are normally written in the three comment books available to visitors in the galleries.

It should be noted that prior to the introduction of the clocking-in machine, Museum staff had some concerns that visitors would be hesitant to 'clock-in', because of associations with work, etc. In actual fact, visitors seem happy to participate, to offer their comments, and to have their free souvenir postcard.

Small museums often need to develop visitor research strategies that are different from the large national museums, simply because they don't have the funds and staff to implement larger, more elaborate studies; the 'time-clock' shows one way in which this can be done. Furthermore, the nature of the time clock experiment requires visitors to think about their experience of visiting the museum in a way they have never done before. Visitors become, in a sense, more self-conscious about their experience: the physical act of clocking in signifies the beginning of their visit in which must participate. As a

result of clocking in visitors may become more engaged with the objects which they are viewing, after having interacting with an object immediately upon entering the museum gallery space. In this situation, the comments and reflections offered by visitors, may have more significance and use to the museum than do those offered in comment books.

The 'time-clock' experiment has provided the Whipple with necessary and valuable visitor experience data, and has provided visitors with an engaging interactive museum experience and a free postcard! The success of their experiment is indicated not only by visitor engagement and the collection of valuable data, but further by the expression of interest on the part of other museums (including another university museum and well as a national) in adopting the Whipple's method.

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References

- Ambrose, M. L. and C.T. Kulik. 1999. "Old Friends New Faces: Motivation Research in the 1990's", *Journal of Management*, Vol. 25 No. 3, pp.231-92.
- Arts and Humanities Research Council, England. www.ahrb.ac.uk/ May 2 2005
- Currie, G. and C. Hobart. 1994. "Can Opera be brought to the Masses? A Case Study of Carmen the Opera", *Marketing Intelligence and Planning*, Vol. 12 No. 2, pp. 13-18.
- Gilmore, A. and R. Rentschler. 2002. "Changes in Museum Management: A Custodial or Marketing Emphasis?" *The Journal of Management Development*, Vol.21 No.10, pp.745-760.
- Goulding, C. 1999. "Heritage, Nostalgia, and the "Grey" Consumer", *Journal of Marketing Practise: Applied Marketing Science*, Vol. 5 No. 6/7/8, pp. 177-99.
- Goulding, C. 2000. "The Museum Visitor Environment and Visitor Experience", *European Journal of Marketing*, Vol. 3 No. 3/4, pp.261-78.
- Kirchberg, V. 1996. "Museum Visitors and Non-Visitors in Germany: A Representative Survey", *Poetics*, Vol. 24 No. 2-4, pp. 239-58.
- Kirchberg, V. 1998. "Entrance Fees as a Subjective Barrier to Visiting Museums", *Journal of Cultural Economics*, Vol. 22 No. 1, pp. 1-13.
- Kotler, P. and N. Kotler. 1998. *Museum Strategy & Marketing; Designing Missions, Building Audiences, Generating Revenue & Resources*, Jossey-Bass.
- McLean, F. 1996. *Marketing the Museum*, Routledge, London.
- Reece, D. and P. Palmgreen. 2000. "Coming to America: Need for Acculturation and Media Use Motives among Indian Sojourners in the US", *International Journal of Intercultural Relations*, Vol. 24 No. 6, pp. 807-24.
- Screven, C. 1986. "Exhibitions and Information Centres; Some Principles and Approaches", *Curator*, Vol. 29 No 2, pp.109-37.
- Taylor, P., E. Owen, H. Bell and S. Withnall. 2001. "Increasing Young People's Attendance at the Theatre: A Case Study in Sheffield, UK", *Managing Leisure*, Vol. 6, pp. 141-53.
- Wood, I. 2004. "Collecting Cultural Data – A DCMS Perspective", in *Counting Culture? Practical Challenges for the Museum and Heritage Sector*, Eds Kelly, C. and Roodhouse, S. Greenwich University Press, London.
- Yorke, D. A. and R. R. Jones. 1984. "Marketing and Museums", *European Journal of Marketing*, Vol.18 No. 2, pp. 90-99.