

Dino Jaws Summative Evaluation Summary
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Introduction

Dino Jaws is a temporary, touring exhibition at the Natural History Museum. It consists of animatronic dinosaurs, a digital trail and other activities and is aimed at families with children aged 5-11. This document is a summary of the main summative evaluation report.

The evaluation was carried out over summer and autumn 2006 during school holidays, weekends and term time weekdays. A variety of methods were used to gather data; visitor tracking, an exit survey, open-ended interviews with school children and pop up web surveys. There are also web stats and a marketing survey which have provided information on the exhibition.

Visitor profile

In the period July –November 2006, Dino Jaws attracted 158,807 visitors, an average of 1134 per day. Nearly double the number of visitors attended during weekend and holiday times as compared with term time weekdays.

In terms of the age profile of those surveyed and tracked, the exhibition did seem to be primarily attracting its core target audience of families with children aged 5-11. However, visitors seemed to be less diverse than even the general Museum visitor profile.

Visitor behaviour in Dino Jaws – what did they do?

Visitors were tracked around the Dino Jaws exhibition without their knowledge to find out what they did during their visit. Visitors were most likely to be in groups of 2 or 4, usually an adult with a child or two adults with two children.

Visitors were timed to see how long they spent in different parts of the exhibition. Dwell time is a useful measure as it is an indicator of how engaged a visitor is in an exhibition.

Overall, visitors spent a mean average of 28 minutes in the Dino Jaws exhibition. The median was just slightly less at 27 minutes. This is only slightly below the project team's estimate of 30 minutes.

Visitors were timed in the three main areas of Dino Jaws. In the Introductory area visitors spent an average of 7 minutes. In the Dig area visitors spent an average of 9 minutes and in the Feed area visitors spent an average of 12 minutes.

In addition to timing visitors to Dino Jaws, observations about which individual exhibits visitors stopped at and how they engaged they were with them were also noted. This enables us to work out both what an average visitor might do in the exhibition but also which exhibits were most successful at engaging visitors.

Visitors made an average of 34 stops during the 28 minutes they were in the exhibition, spending an average of 49 seconds at each stop (some stopped more than once at the same exhibit). The average

visitor spoke to others in their party 16 times, used 15 exhibits, read five pieces of text and queued up to use an exhibit twice.

The “average visitor” profile shows us that visitors were much more likely to talk to each other and use exhibits than they were to read information.

The exhibits that people stopped at the most often can be seen as the most appealing. Tracked visitors were most likely to stop at the large animatronics in the Feed area. The three most popular were the *Velociraptors*, *Ceolophysis* and *Baryonyx*. Over 90% of visitors stopped at these exhibits. Interestingly, these exhibits are all carnivores, although the herbivore animatronics were also popular.

Also popular were the Virtual Dig and the large head animatronics. In total, a third of the exhibition was stopped at by over 80% of those tracked.

The least popular exhibits were the Introduction to the Dig, the Discovery Book and the Jigsaw in the Dig area and the video.

Conversation at exhibits is a good measure of visitor’s engagement and the more engaged they are the higher likelihood of learning. Although the researchers were not close enough to visitors to hear their conversation so we cannot be sure they were talking about the exhibit, the exhibits that seem to encourage the most conversations may be seen as the most engaging. In general there were high levels of conversation in the exhibition showing high levels of engagement.

The exhibit that encourage the most conversations was the pack of *Velociraptors* followed by the *T. rex* head and the *Baryonyx*. Over 60% of visitors had conversation at these exhibits. Again the carnivores appear to be engaging the most visitors. This corresponds with the exit survey where visitors mentioned that the thing they were most surprised about the Dino Jaws was the fact that the *Velociraptors* were feathered or furry.

The Dino Jaws exhibition does not include a large amount of text labels. Nevertheless, under a third of visitors appeared to read any text at all and most of these were adults.

Certain areas of the exhibition were bottlenecks and caused visitors to queue during busier periods. This was most often true of the Virtual Dig. 21% of visitors had to queue to use this exhibit. This was partially due to its popularity but also due to the fact that it was unreliable and visitors had a great deal of trouble getting it to work satisfactorily. Nearly a third of visitors left without completing it, although most had another go, showing that it was popular and attractive but just not working correctly. Less than 9% of visitors left any of the other exhibits without finishing them.

The area around *T. rex* also proved to be a bottleneck. This may be due to the fact that this group of exhibits were the first animatronic based exhibit visitors came across.

On average 70% of visitors stopped at least one of the stations on the digital trail. More visitors stopped at the exhibit than actually used it. Sometimes visitors shared their tickets or were helping others in their group. One of the aims of the trail was to encourage visitors to collect clues throughout the exhibition and so the drop off rate between the Call to Action, the first stop and the last one, the Answer Station was noted. In total 75% of the number of people who used the Answer Station used the Call to Action.

Visitors' views about Dino Jaws – what did they say?

Visitors were interviewed upon exiting Dino Jaws. Also, three schools were visited and their students interviewed several weeks after their visit. The survey and interviews aimed to find out about visitors' feelings towards the exhibition and to find evidence of learning.

Just over ½ of the exit survey sample rated Dino Jaws as good or excellent value for money. This is higher than the similar question on the marketing survey but still lower than the Museum hoped.

There was no correlation between visitors' perceived dwell times (a mean average of 37 minutes) and their value for money rating.

Visitors were asked what they felt the exhibition was trying to tell them in order to tease out the learning outcomes and in particular the cognitive learning outcomes that visitors had taken away.

Visitors were most likely to say that the exhibition was about what dinosaurs ate (3/4) or how dinosaurs lived (almost ½). Visitors often elaborated on these answers such as talking about herbivores and carnivores but did not go beyond this basic cognitive message. Only 8 visitors took themes further and said that the exhibition was about how we know what dinosaurs ate.

The school children's' answers followed a similar pattern to the family groups' answers although the school children's' answers were highly qualitative and have not been quantified.

In order to probe if the students were learning more than the basic cognitive message of what dinosaurs ate they were asked to elaborate further on what dinosaurs ate and how they knew what they ate.

The students were able to talk about what dinosaurs ate such as mentioning carnivores and herbivores but a minority of younger students left the exhibition with the misconception that dinosaurs really did eat food such as sausages. They had misunderstood the analogies made with modern food. The older children interviewed did not have this misconception and the analogies seem to engage them well.

It was hoped that visitors would take away learning outcomes about the role of scientists and how they find out about dinosaurs.

About half of the exit survey respondents were able to identify what scientists were doing in the exhibition, with most saying that the scientists were giving them information or clues to do with their mystery dinosaur or excavating bones and fossils.

When visitors were asked to identify if they had performed any activities that a scientist might do when they were in the exhibition, nearly all who responded positively mentioned taking part in the Virtual Dig showing they had gained knowledge about scientists fieldwork but not about other aspects of a scientist's work or how they analysed their finds to discover about dinosaurs' diets.

The most popular part of the Dino Jaws exhibition for visitors was the large animatronic dinosaurs. This supports the finding from the observations. The interactive components of the exhibition also scored highly with visitors. In particular, the Virtual Dig and Digital Trail were popular. These elements were also popular with the school children.

The older children also talked about the dinosaur poo a lot, although it was mentioned infrequently in the exit survey. They often thought it smelled or didn't smell enough, although in fact it is not scented at all. The children saw the poo as a funny exhibit but had not picked up on why poo might be useful to scientists.

Many visitors (families and school children) could not think of areas they did not like about the exhibition. Some visitors thought the exhibition was a little scary or did not meet their expectations. In terms of improvement, many visitors (families and school children) wanted to have more of the exhibition. They wanted it to be bigger with more dinosaurs and more interactives.

There was a high awareness of the digital trail and most visitors had used their ticket at least once. About half of the exit survey respondents mentioned that they were using their ticket specifically to gather clues. Other responses included playing games and the virtual dig.

The digital trail was less successful with school groups than family groups. Although many of the school children had enjoyed using the trail, it was difficult for teachers to organise large numbers of children and tickets in a confined space, leading to some losing their tickets or not getting to use exhibits

There were two pop up surveys which sought to find out the views of virtual visitors. One was placed on the Dino Jaws site and one on the Dino Club site. For both sites, visitors were most likely to have bought tickets to the exhibition while physically at the Museum and during browsing on the site were likely to have visited other parts of the Natural History Museum site, in particular Visit Us and Kids Only. Visitors rated the activities they found on the Dino Jaws sites highly.

Conclusions

From observing and interviewing schools and family visitors it is clear that the Dino Jaws exhibition provides an enjoyable and affective experience for the vast majority of visitors.

The exhibition is engaging and conversation among group members is common, highlighting the potential for learning in the exhibition.

Particularly engaging for visitors were the carnivores animatronics and the Virtual Dig, although the Dig was rather unreliable.

Although the exhibition was successful in terms of affective learning outcomes, cognitive learning outcomes tended to be rather basic.