

CATALYST LEARNING AND COMMUNICATION

Time and Tide

External evaluation report

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Initial report: 4 April 2015

Updated to include the final project event evaluated by the project team: 15 September 2015



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Time and Tide: External Evaluation Report

Introduction

The Time and Tide project was evaluated by Catherine Aldridge of Catalyst Learning and Communication. Time and Tide was an ambitious project bringing together a diverse range of partners and audiences including:

- community groups for young people, older adults and young adults with disabilities
- local scientists and other experts
- the storyteller
- the project team of science communicators
- the library
- local schools and
- the wider public (mainly families with pre-teen children and older adults)

The project led to many different types of events and activities for these different audiences. The project was also designed so that the outcomes from earlier events fed into later events e.g. young people carried out science activities and worked with the storyteller to shape the stories that were then presented at the large public 'Fair in the Square' event, the adult talk 'Talking Tides' and the final storytelling event.

The evaluation plan therefore had two key strands:

1. Formative evaluation: establishing simple tools to assist the project team in
 - a. tracking project outputs and participation across the project using an Excel spreadsheet
 - b. gaining immediate feedback from the young people through short focus group sessions and informal discussions
 - c. reflect on lessons learned after each session to feed into future activities

This part of the evaluation was conducted as internal project evaluation and the project team has collated and commented on them in its final report.

2. Summative evaluation at two of the project's final events: Fair in the Square and Talking Tides. This summative evaluation sought to identify:
 - a. Reach: how many people attended and who they were age, postcode
 - b. Overall response to the event and the factors that made it successful or could be improved in future work
 - c. Existing interest in science and whether the events have increased interest in science and science events
 - d. Science learning as a result of the event, in particular the double high tide in Christchurch
 - e. Audiences' response to the project's approach using storytelling to communicate science

The evaluation did not extend to reviewing project management or project processes. This has been done through the project manager and team's self-evaluation and details are given in the final project report.

The events

Fair in the Square

Fair in the Square was run in a marquee in Christchurch town centre with storytelling sessions in the local library. Both elements were free of charge and were offered on a drop in basis to the general public. No prebooking was required. The marquee activities comprised: a welcome desk, hands on area with mini science experiments/make and takes, a microscope table, a display from a local environmental group, a large scrabble board with time and tide words displayed, a clay modelling table to make sea creatures or other creations, a 'wandering' tidal expert, drop in storytelling sessions, Time and Tide display boards created by the young people in the project, an information station with more details about STEM activities locally and beyond and the evaluation graffiti wall.

Fair in the Square grew out of work that had been done with local youth groups and other partners and experts. Hands on activities were led by the youth group and partner organisations. Stories that had been developed as part of the project were told at the library periodically through the day.

Talking Tides

Talking Tides was an adult talk arranged with a local sailing club. It included a talk from a local tide expert and the project storyteller's story. It ran after the Fair in the Square and was over-subscribed.

Thomas Tripp Tales on the Tide final event

The final event of this project took place on 30 April 2015 at a local pub, after the main external evaluation had been completed. Approximately 35 people (including 5 young people) attended with a further 15 dropping in.

Methodology

Summative evaluation: Fair in the Square

The following evaluation tools were used at the Fair in the Square event:

Visitor number stickers

Everyone was given a sticker as they came into the Fair tent. 480 of these were printed and all were used so after that point, a tally was drawn up.

Observations

1. Audience: overview of audience breakdown: families, couples, single adults, etc. by taking five snapshot counts during the day
2. In addition, five groups were tracked through the experience, recording:
 - a. The number of people in group, gender, ages
 - b. Which activities they did and in what order?
 - c. How long did they stay?
 - d. Behaviours: Discussion (with each other, with 'experts', with other members of the public, questions asked, science content comments), indication of enjoyment, experimenting, comments on graffiti wall.

Graffiti wall

Sticky dots and pre-printed stickers were used to seek and share visitors' views. The questions were:

1. One thing I liked doing...
2. One thing I didn't know before...

3. One thing that surprised me...
4. Would you come to another event like this? Yes/No/Maybe
5. Why did you come today? Options: Family day out/Walked past and it looked interesting/Saw the leaflet/Website/Other
6. Who am I? Pre printed stickers to post on the wall

I am: Male/Female
 I am years old
 My postcode is...
 Before today I thought science was: Interesting and enjoyable interesting but difficult not for me
 My view of science now: Interesting and enjoyable interesting but difficult not for me

In reality, the graffiti wall was not self-completed by visitors and the evaluator had to encourage people to engage and adapted the approach to more of an exit survey to gather feedback effectively.

Feedback from experts/organisers:

Informal discussions were held with experts, organisers and the volunteers who helped on the day to gain their overall views of the project: What worked well? What could be improved?

Summative evaluation: Talking Tides

Talking Tides was evaluated using a paper questionnaire. All attendees were given an evaluation form to complete and it can be found in Appendix 1.

Summative evaluation: Thomas Tripp Tales on the Tide

A paper questionnaire was devised and circulated by the project team. It can be found in Appendix 2 along with the project team's report of the event.

Evaluation Results

The project events were highly rated by participants and stimulated further interest in science events

Over 600 people attended the Fair in the Square. **All** 68 respondents to the exit survey/graffiti wall stated 'I would come to another event like this'.

There was a very positive response to Talking Tides event which was oversubscribed with 93 people attending. **All** 55 respondents rated the event as excellent or good. **All** respondents found the event was well-organised and most people (83%) agreed they would be more likely to attend an event as a result of the talk.

Thomas Tripp Tales on the Tide was also well-received with **all** respondents stating that they:

- Found storytelling an effective way to share how and why the tides happen in and around Christchurch.
- Were interested in other science based forms of entertainment
- Would attend future events
- Would recommend future performances to friends.

The Time and Tide project effectively engaged a diverse range of Christchurch residents with local science.

Fair in the Square: Five groups of visitors (three family groups, a pair of teenage girls and an adult

couple) to the science fair were observed during the science fair, as well as one of the storytelling groups. Their conversations with each other and with those running the activities included questions and answers about the science of the tides, the density of salt and fresh water, single celled organisms in the water as viewed through a microscope and more. The vast majority of their conversations while in the tent centred on the science activities and display boards.

One of the families observed engaged with the hands on science activities for just under 90 minutes and the average dwell time was about half an hour.

A graffiti wall and exit interviews captured what visitors liked doing, what they found out and what they found surprising. Information was gathered from 68 people over the course of the day and all comments from **all** the respondents focused on the science in the activities.

“I like science in school but mostly we just have to learn the facts. I never thought about the salt water or the tides. Doing this stuff kinda makes it make more sense.” Girl at Fair in the Square, age 13.

“In Christchurch harbour, the freshwater sits on top of the salt water.” Girl at Fair in the Square, age 7

“I had no idea that the Sun is involved in the tides as well as the moon.” Man at Fair in the square, age 50s

“I’ve always lived here and always thought the Isle of Wight caused the double tide.” Man at Fair in the Square, age 60s

“It’s interesting to hear about the ancient ideas for the tides and then hear about the effect of the Atlantic. My husband and I sail and are aware of the double tide – and the trouble you can run into - but we never really knew why it happened. It was fascinating to hear from the tide expert, read the panels and look at what’s in the water under the microscope...I thought it was all for children, and it’s fascinating for them, but I’m so pleased we came in” Women, 60s, Fair in the Square

“My children loved all the experiments. We never knew you could make those diver things.” Woman, 20s, Fair in the Square.

At the **Talking Tides** event, 55 of the 93 participants completed a post-event questionnaire which included the question ‘What did you find particularly interesting about tonight’s talk?’ 87% of respondents provided an answer to this question. Several themes emerged from their answers. Most people (73%) cited the science, information or explanations about the tide while 9% were impressed by the clarity of the talks and explanations and 16% mentioned the storytelling and local issues and history and the remainder cited ‘all aspects’ or ‘all of it’.

“Corrected my misunderstanding.” Talking Tides participant, age 60s

“Amphidromic points” Talking Tides participant, age 60s

“How important were the sun and moon as described by the excellent lecturer!” Talking Tides participants, age 80s

“Basin effect and Holland’s impact – not the IoW.” Talking Tides participant, age 50s

“Why we have a double high tide in Xchurch and how unique this is.” Talking Tides participant, age 50s

At **Thomas Tripp Tales on the Tide**, people liked the mix of storytelling, music, fact and fiction.

The topic of the tides in Christchurch was relevant and of interest, particularly to adults.

Many of the adults who were involved had a particular interest in the tides through sailing or employment related to sailing or the harbour.

“I am interested in the particular topic as I am a dinghy and cruiser sailor.” Age 60s

“For me, I was more interested in the oceanographers talk. I teach sailing and therefore tides so it was brilliant to see it delivered in so much detail. For future events, I would be interested to hear about the effects of dredging, coastal erosion and what formed Hengistbury Head.” Talking Tide participant, age 60s.

At Fair in the Square, adults tended to engage more with the information about the tides provided by the display boards and the local tidal expert than with hands on water science activities. Adults without children tended to cite information about the tides the thing that they liked or found surprising.

The couple observed spent more than 20 minutes looking at the display boards and talking to tide expert.

Participants connected to the science through a local issue and valued the local nature of the project

Nearly all the people who participated in the project came from within 10 miles of Christchurch. This was the case for **all** Fair in the Square exit survey participants.

Most questionnaire respondents at Talking Tides (71%) were from the Christchurch area (BH23) with small numbers from Bournemouth (BH6) and Wimborne (BH21) and nearby Hampshire villages (BH25). Individuals also came from BH2, BH5, TW16 and DT9.

The local issues were a driver for engagement, particularly for the Talking Tides event:

“A general interest in local issues and enjoyed the opportunity to find out more about their local community.” Talking Tides respondent, age 50s

“I’ve recently moved to the area and want to understand and enjoy the natural world locally.” Talking Tides respondent, age 60s

The children involved in the project found some of the wider ocean science more engaging than the tides but also learned about the tides

Somewhat ironically, the project ended up covering a wider range of ocean science than originally planned, particularly with young people. At the youth groups, some of the children did not engage immediately with the content planned by the project team. In response to this, the project team brought in other aspects of the science of the ocean, often which had a more hands-on element and these were very well-received.

The hands-on elements of Fair in the Square were extremely popular with children and families. The things they liked doing, found out about and found surprising were mainly the hands-on water science activities as shown by a few quotes from children attending the Fair in the Square event e.g.:

“I liked seeing the tiny ‘slugs’ under the microscope.”

“The gunge bounced!”

“The drops on the coin. Amazing!”

“Making the rainbow tube with the heavy salt water.”

The events attracted both those ‘new’ to science and people already interested in science

The Talking Tides event attracted both people who are working in science and technology and those who are not. Nearly half (47%) of respondents had a job in science or technology, 35% did not and 18% stated they were retired and did not indicate whether or not they had worked in science and technology.

Three quarters of respondents stated they were already interested science and technology, with 29% strongly agreeing that they are already interested.

At the Fair in the Square, most people dropped into the tent as they went past, with less than 10% making the trip because they had seen promotional materials. Although most people (69%) said that they had some interest in science on the graffiti wall/exit survey, few of the adults had worked in or studied science beyond school.

Participants felt they could access science as a result of the project

At the Fair in the Square, 55% of respondents said that before the event, they found science either interesting but difficult (24%) or ‘not for me’ (31%), while after the event this dropped to 16%.

Participants wanted further opportunities to engage with science

At Fair in the Square, people asked for more information and were pleased to have a booklet to take away to try the experiments at home.

At least 50 of the visitors to Fair in the Square returned for the story session or to revisit the tent, with other friends or family. One family observed returned for the story session and the children mentioned what they had learned about salt water in the fair as part of the session, a couple of hours later.

“It’s great to have this for children. Are you going to do this as a regular event? My children would love more.” Parent, Fair in the Square

“I’m coming back with my grandchildren.” Individual adult, Fair in the Square

Based on the exit interviews, 10 adults said they would attend the Talking Tides events and bookings more than doubled after Fair in the Square.

Following Talking Tides, most people said would be more likely to attend science events as a result of the event. Just under half of respondents (49%) stated they do not regularly attend science events but most people (83%) agreed that they would be more likely to attend other science activities as a result of the talk. Of those who do not regularly attend science events, 72% said they would be more likely to attend a science event.

At the Thomas Trip Tales on the Tide event all respondents said they would recommend the event and wanted further science based events.

The youth steering group developed life skills and gained self-esteem as well as learning new science

The project’s small youth steering group became deeply engaged in the project and moved from being part of the ‘audience’ to being part of the delivery team. The impact on the young people in the steering group went far beyond learning some new science. They were highly motivated, took

ownership of activities at the youth clubs and the Fair in the Square event. These young people clearly developed a range of life skills as a result of the project, such as communication, self-organisation, teamwork and problem solving which enabled them to play a very active role in running the successful public science fair. They developed a real sense of pride in their contribution to the project, from selecting the storyteller to creating professional quality display boards to leading science activities for families.

Storytelling connected the science to wider cultural references

“It was an excellent idea to have the two speakers, coming at the topic from different directions.”
Talking Tides participant, age 70s.

At Talking Tides, most people (80%) agreed with the statement “storytelling is a good way to communicate science”, though some respondents qualified this by indicating it was good for children. Some people particularly like the wider cultural references to the tides in the stories and their comments indicate that they saw the stories as distinct from the science, rather than being stories about the science.

“Clear presentation of reasons for complex local tide and enjoyable presentation of stories about the tides and good links between ‘mythos’ and ‘logos’.”

“It just brought everything about the tides together, the stories and the science.”

Of those who disagreed, several stated that it was still entertaining or interesting, or that it was appropriate for children. There was a very small minority who did not find it useful.

“The storytelling didn’t do it for me today. (It’s) important that children don’t confuse fiction and fact.”

At the Fair in the Square, people returned later in the day, after visiting the tent of activities, to hear the storyteller. Children were able to inject their science experiences gained at the Fair into the story. Children and their parents found the stories enjoyable and entertaining, and indicated they stimulated thinking:

“I remembered everything she had done in the morning. The storyteller was great at getting the kids to make connections to what they already knew. It’s fun. I’m glad we came back.” Parent, Storytelling at Fair in the Square.

Meeting the needs of partners changed the project but led to deeper outcomes and wider reach than anticipated

Sensibly, the project team evolved the project’s objectives so that they would be in line with the responses from and interests and availability of their partners and audiences. The timescales of the project were very short which made it challenging for all the scientists and other experts to participate in the project as originally planned and funding cuts led to one group not being able to participate. This meant that some aspects of the project have had different outcomes to those originally proposed but the project team has worked flexibly to reshape the project to meet the needs of its audiences. This responsiveness has led to deep engagement, in particular with the small group of young people in the steering group and some of the children who attended the TNT Saturday/holiday club on an ongoing basis.

Overall the project has made a greater (although different) impact compared what was originally anticipated, both in terms of reach and outcomes.

The project had a snowball effect in the community

The project was layered and this helped it to build momentum and a 'following': early interactions with schools and community groups promoted the large public event in the centre of Christchurch which subsequently raised the profile of the adult lecture which was over-subscribed. Nearly 700 people were involved with these larger public events and many more will be engaged with the final storytelling performance in April and with the project's legacy, namely the display boards that will be on display in the library and then a local visitor centre.

Appendix 1: Talking Tides: 24 March 2015

We value your feedback and would be grateful if you would let us have your views about tonight's event.



How would you rate this event?			
1. Excellent <input type="checkbox"/>	2. Good <input type="checkbox"/>	3. Poor <input type="checkbox"/>	4. Very poor <input type="checkbox"/>

Question	1.	2.	3.	4.	Comments: Please add any additional information.
	Strongly agree	Agree	Disagree	Strongly disagree	
The event was well-organised.					
My job involves science and technology.					
I regularly attend science events and activities.					
I am already interested in science and technology.					
I am more likely to attend other science activities as a result of tonight's talk.					
Storytelling is a good way to communicate science.					

Question	Comments
What did you find particularly interesting about tonight's talk?	
Why did you decide to come today? (Please tick answer)	I have a broad interest in science/engineering. <input type="checkbox"/> The marketing material/social media made the event sounds appealing. <input type="checkbox"/> I came to hear the speaker/presenter. <input type="checkbox"/> I was brought along by a friend/family member. <input type="checkbox"/> Other reason (please state):
Are there any other comments that you would like to make to inform the planning of future events?	
What is the first part of your postcode e.g. OX1?	
Your age / years (please circle your answer)	15-19 20-29 30-39 40-49 50-59 60-69 70-79 80 or older

Thank you for taking the time to complete the form. Your feedback will help inform our future events and plans.



Time and Tide

Feedback and request for further information

Keep in touch:

NAME

Phone

Email

Address (if none of above)

We promise not to bombard you with information and will only send invitations or updates to similar work. We comply with the data protection act.

To what extent did you find storytelling an effective way to share with you how and why the tides happen in and around Christchurch?

A lot Quite a bit Not a lot Not at all

Would you be interested in other science based forms of entertainment? YES NO

We are part of a community group to reinvent the Electricity Museum as a science and discovery centre and meeting space. As part of this we are raising funds to create a temporary science centre in Saxon Square.

Would you like to be kept informed about this? YES NO

Would you support this by attending events? YES NO

Would you recommend a future performance to your friends? YES NO

Would you like to bring children / grandchildren along? YES NO

What did you most enjoy about this evening?

Any other comments:



Finale storytelling event: Thomas Tripp Tales on the Tide

The storytelling performance event took place on 30 April 2015 at the Thomas Tripp pub in Christchurch Town Centre. The event was marketed at adults and it was advised that children should be over 11. The venue was changed 4 weeks before the event because of a double booking at the previous venue. In retrospect, the Tripp was less suitable as the performance space was open to the bar area and there were issues with background noise affecting audibility.

Martin Maudsley's storytelling performance of *Tales on the Tide* comprised 8 stories from world myths, to local legends and original compositions weaving together science, history, local landscapes and folklore. The stories were accompanied during the performance by professional musician Fiona Barrow who played incidental music on fiddle, harp and melodeon.

The audience comprised around 35 people (including 5 young people) with additional interest from regular drinkers, reaching around 50 people. The venue manager himself listened to some of the performance and was very verbally positive about the experience.

Fourteen feedback forms were returned. The feedback about the event, stories and management of the event was positive:

All respondents stated that they:

- Found storytelling an effective way to share how and why the tides happen in and around Christchurch
- Were interested in other science based forms of entertainment
- Would attend future events
- Would recommend future performances to friends.

Overall respondents liked the storytelling and the storyteller and the mix of music, stories, fact and fiction but found the venue noisy.

Great

The energy of the story teller

Stories were great. The venue was a bit noisy. Have you thought of the lounge in Christchurch rowing club? Or Riverbank on wick lane?

Excellent. Poor background noise

The players very talented. Shame about the venue but well done for trying to sort it out

I like child free events, however the children were well behaved. I loved the story telling and the musician, they complemented each other very well. Great myths and legends and very well told, despite the noise.

Shame it was in the pub. Too late for Grandchildren. Martin should record a CD. Most original and a great atmosphere.

Both performers were very good the stories were captivating, music was great. Shame about the bar noise

Martin was great. Try George inn

Good energy .Most engaging tales left till last. Great musical accomplishment

The variety of fact and fiction, stories, songs and musician

“In my experience Time and Tide has been a ground breaking project in the way that it connected so many different groups of people so effectively: youth clubs, local history groups, schools, higher education students and professional scientists. It has changed the way that I work and demonstrated clearly the advantages and potential for weaving together science fact and story fiction to engage and inspire young and old about the wonders of the world around them.” Martin Maudsley, 2015.