

British Science Festival Evaluation report



British Science Association

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1. Executive Summary

About this report

This report presents the evaluation findings of the British Science Festival 2018 and resulting conclusions and recommendations for the future.

The report details the work undertaken for the evaluation and presents findings in relation to the Festival aims, objectives and measures of success.

The analysis is based on data gathered via audience and stakeholder questionnaires, and a review of programme documents and data supplied by delivery partners.

Evaluation data

Evaluation data for this report has come from various sources:

1. Data about the number of people in attendance is by observation by association staff and Festival assistants. Where this data was unavailable, figures were calculated using the number of people booked onto events and the average drop-out rate.
2. Audience Questionnaires completed by Festival attendees which include demographic questions and questions about the about their experience of the events they attended.
3. Short interviews were also conducted with attendees at specific events.
4. Speaker data was based on forms completed by event organisers before the Festival. Speakers were also sent a questionnaire after the Festival and quotes were taken from correspondence with speakers after the Festival.
5. Media impact was monitored through external agencies employed to detect print and broadcast coverage and estimate the Advertising Value Equivalent (AVE).

Evaluation process

We evaluated **104** events open to public audiences and received a total of **3261** feedback forms from attendees. Interviews were conducted at all evening events to give us a greater insight into attendee's relationship with science. These interviews, along with data from questionnaires, will inform programming for next year's Festival when we hope to increase the representation of the 'Inactive' audiences in line with the BSA's strategy (Fig 1).

2. Key Findings

Programme content

- There were **104** standalone events
- **80%** of events took place on campus, the remaining **20%** took place in venues across the city
- Across the whole programme, research from the University of Hull represented **25%** of Festival events
- **22%** of events were organised by the BSA's Scientific Sections, a further **22%** of Festival events came through the Open Call and **25%** of the Festival programme was organised by the BSA
- There were **5** community-organised events and **3** events for invited audiences such as stakeholders, education professionals and media
- Of the Festival speakers surveyed, **50%** identified as male, **49%** as female and **1%** as non-binary. This is very close to our target of a 50:50 gender split, and is slightly more balanced than the ratio in the 2016 and 2017 Festival.

Festival Impact

- The total attendance at the Festival events was **15,260**
- Satisfaction rates from attendees were very positive with **92%** of attendees rating events as excellent or good
- Festival attendees reported an improvement in their attitudes to science, with **61%** stating they felt more interested in science after attending a Festival event. **78%** stated that they were more likely to look out for and attend science events and activities after attending a Festival event.

Audience demographic

- **48%** of attendees were aged between 16 and 34, which is the target audience for the Festival
- **59%** of attendees identified as female, **39%** as male. Just under **1%** described their gender as other and just over **1%** preferred not to state their gender
- **89%** of attendees identified as White, **4%** as Asian, **2%** as Black and **1%** as Mixed.
- **60%** stated that they did not work in a science related job. Of those, **33%** stated they were interested in science but make no particular effort to engage.
- **72%** of attendees live in a Hull postcode area (HU).

3. Introduction

The British Science Association

The British Science Association (BSA) is a charity with a vision to make science a fundamental part of culture and society. Its mission is to support, grow and diversify the community of people who are interested and involved in science. Our programmes, including the British Science Festival (BSF), give public audiences a platform to access and enjoy science and strengthen their influence over science's direction and place in society.

The British Science Festival

The British Science Festival (BSF) is Europe's longest-standing national science event which connects thousands of people with researchers from across many different scientific fields. Thousands of people come together to celebrate the latest developments in science and to engage in open discussion about issues that affect our culture and society. The Engagement team at the BSA organises a number of public programmes and events. The British Science Festival is one of the BSA's flagship programmes. Each September it transforms a different UK city into a vibrant celebration of science, engineering, technology and art.

British Science Festival 2018

The 2018 British Science Festival took place in Hull and the Humber, hosted by the University of Hull. Taking place from 11-14 September, this was the third time the Festival has been to Hull – the first being in 1853 and then again in 1922.

4. Festival Aims and Objectives

Since 2015, the British Science Festival has had a refined target audience of adults with a broad interest in science. Building on the success in previous years, the 2018 Festival followed a similar model.

The audience types referred to in the aims and objectives are taken from the BSA audience map (Fig 1) which informs all of our programmes.

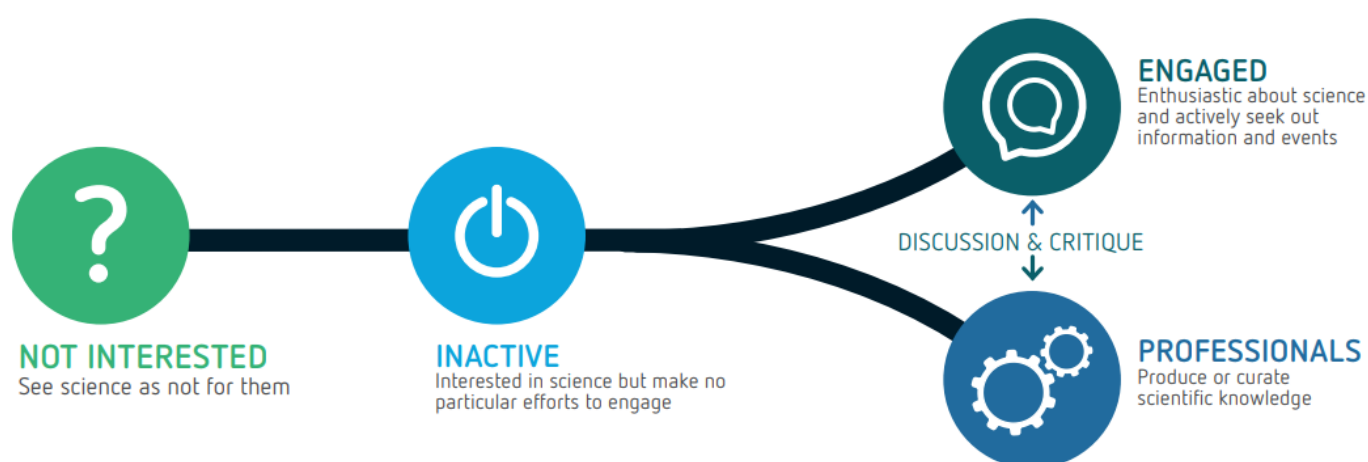


Figure 1 showing the BSA audience map.

Aims

- To establish the BSA as a leader in science engagement in the UK science festival scene
- To reinforce 'Engaged' audiences' science identity
- To encourage 'Inactive' audiences to feel more connected to science
- To encourage active researchers ('Professionals') to value and participate in public engagement activities
- To facilitate lasting relationships between the Universities, researchers, partner organisations and the local community.

Aims and objectives

Aim:	To establish the BSA as a leader in science engagement in the UK science festival scene (6.1).
Objectives:	<p>The BSA will curate an innovative programme of over 100 events across the city that are aligned with the BSA's vision (6.1.1).</p> <p>The BSF will reach audiences that represent the diversity of the local and national population (6.1.2).</p> <p>Attendees will have a positive experience of the Festival and feel more connected to science after attending Festival events (6.1.3).</p>
Target audience:	'Professionals' 'Engaged' and 'Inactive'.
Actions:	<p>Curate an innovative programme of over 100 events that show science as a fundamental part of culture and society.</p> <p>Programme events that showcase cutting-edge research happening in Hull and the rest of the UK.</p> <p>Programme events that will attract audiences that represent the diversity of the local and national population.</p>
Measure of success:	<p>Review and evaluate programme.</p> <p>The Festival is well received by attendees, local partners, the media and the sector.</p> <p>Attendees report a greater awareness of current research.</p> <p>Reach an audience of 15,000 people.</p> <p>Audience demographics are representative of national and local population.</p> <p>Increase the % of 'Inactive' audiences attending the Festival.</p>

Aim:	To reinforce 'Engaged' audiences' science identity (6.2).	November 2018
Objectives:	<p>'Engaged' attendees will have a positive experience of the Festival (6.2.1).</p> <p>'Engaged' audiences attend multiple events (6.2.2).</p>	
Target audience:	'Engaged' attendees.	
Actions:	Programme events that appeal to 'Engaged' audiences and events that create opportunities for socialising (drinks receptions, partner with local science events, etc.)	
Measure of success:	<p>The Festival attracts 'Engaged' audiences.</p> <p>'Engaged' audiences have a positive experience of Festival events.</p> <p>'Engaged' audiences attend multiple events.</p> <p>Attendees report a greater awareness of current research.</p>	

Aim:	To encourage 'Inactive' audiences to feel more connected to science (6.3).	
Objectives:	<p>'Inactive' audiences have a positive experience of Festival events (6.3.1).</p> <p>'Inactive' attendees will feel more connected to science and more receptive to attending science events (6.3.2).</p> <p>'Inactive' and 'Not interested' audiences will increase their interest in and understanding of science, and confidence in engaging with it, through active participation in events that are tailored for them (6.3.3).</p>	
Target audience:	'Inactive' attendees	
Actions:	<p>Through targeted programming, increase the number of events for 'Inactive' audiences (mainly through the off-campus programme) to increase their representation in the Festival cohort.</p> <p>Run a community grants scheme for groups to organise events for 'Not interested' audiences that are embedded in the community.</p>	
Measure of success:	<p>The Festival events attract 'Inactive' audiences.</p> <p>'Inactive' audiences have a positive experience of the Festival.</p> <p>After attending a Festival event, 'Inactive' audiences are more interested in science and attending science events in future.</p>	

Aim:	To encourage active researchers/speakers ('Professionals') to value and participate in public engagement (6.4).
Objectives:	<p>The BSA will provide diverse opportunities for active researchers (also referred to as speakers) to engage with the public (6.4.1).</p> <p>The BSA will programme events that reflect the diversity of current research and the people involved (6.4.2).</p> <p>Speakers will have a positive experience of the Festival (6.4.3).</p> <p>Speakers will feel more confident engaging with the public and will engage with the public more frequently as a result (6.4.4).</p> <p>Speakers will have increased awareness of public perspectives (6.4.5).</p>
Target audience:	Speakers at the Festival ('Professionals')
Actions:	<p>Run formal training sessions for local academics and provide advice to other researchers on communicating their research to a non-specialist audience.</p> <p>Programme and curate a range of events, activities and formats.</p>
Measure of success:	<p>Review and evaluate programme.</p> <p>Evaluate findings from the speaker feedback questionnaire.</p>

Aim:	To facilitate lasting relationships between the University, researchers, partner organisations and local community (6.5).
Objectives:	<p>Provide a positive experience for venues so that they will be open to hosting future science events (6.5.1).</p> <p>Partner organisations will collaborate and develop relationships with researchers.</p>
Target audience:	Venues and partner organisations
Actions:	<p>Partner with cultural organisations and venues across the city, making a special effort to involve local researchers in these events and activities.</p> <p>Work with the BSA Hull branch on a Festival event.</p> <p>Put researchers in touch with the Hull Science Festival.</p>
Measure of success:	<p>Review and evaluate programme.</p> <p>Anecdotal feedback from researchers, partners and venues.</p>

5. Recommendations from 2017

- Focus programming and approach city events in a more strategic way, focusing on one area of the city each evening to help with staffing and give people opportunities to attend multiple events in one area and to create a Festival buzz.
- Change evaluation form so that it also asks 'before this event' on the zoning questions to give a more accurate representation of the different audience types (Fig 1) attending the events. A question should also be added asking if attendees work at the host university to monitor the non-science staff attending events.
- Through interviews, evaluate attendees' experience of the Festival as a whole.
- Improve diversity in the BSF audience.
- Increase engagement with 'Inactive' and 'Not interested' audiences.

6. Findings

The programme of events at the Festival was devised to meet the Festival aims and objectives listed in Section 4 and to incorporate some of the recommendations from the 2017 evaluation.

6.1 Aim: To establish the BSA as a leader in science engagement in the UK science festival scene



6.1.1 The BSA will curate an innovative programme of events across the city that are aligned with the BSA's vision

In total there was **104** standalone events for public audiences, **80%** of which took place on campus and **20%** took place in the city. This includes all ticketed and some drop in events. Events and exhibitions that occur at multiple times on multiple dates are only counted once. Activities that take place at larger events are not counted. This does not include stakeholder events such as the Festival Dinner, the STEM in Education evening or the Sci-com Social.

In total across the whole programme there was **127** events and activities (Table 1). Research from the University of Hull was covered widely in the Festival, making up **25%** of the programme (Table 2). Where applicants from the University were not selected to be a part of the main programme, efforts were made to include them into the wider programme. For instance, the events organised by the BSA, including Trinity Market Late, The Deep Late and Humber Street Party all contained drop in events organised by researchers from the University of Hull. Some of the Section events, such as the Agriculture and Food Section and the Geography Section, also included speakers from the University of Hull.

Table 1 showing the breakdown of the Festival programme (all events and activities)

Organised through:	No. events at Hull University campus	No. events off campus	Total
BSA	18	14	32
University of Hull	19	13	32
Sections	28	1	29
Open Call	12	17	29
Community groups	1	4	5
Total	71	49	127

Table 2 showing the percentage breakdown of the Festival programme (all events and activities)

Organised by:	Percentage of the programme:
BSA	25%
University of Hull	25%
Sections	22%
Open call	22%
Community groups	4%

6.1.2 The British Science Festival will reach audiences that represent the diversity of the local and national population

The total attendance at this year's Festival events was **15,260**. This breaks down into **2797** attendees to the drop in activities and **12,463** tickets ordered through the website. This compares to **11,139** tickets ordered last year, meaning bookings are **12%** up. Where possible the attendance was counted by a Festival Assistant, a member of BSA staff or event organisers. For large drop-in events, attendance was estimated using regular counts throughout the evening. Where this data was unavailable, figures were calculated using the number of people booked into events and the average drop-out rate.

Postcode data

The Festival had a national reach (Fig 2), with attendees coming from across the UK, and a small number of visitors from abroad, including Nigeria and Spain. Most of the Festival attendees (**72%**) lived or worked locally. This is greater than last year's finding in which **64%** lived or worked locally. The high percentage this year may reflect the success and impact that the City of Culture programme has left on Hull, in that residents may be more open to attending events. A Polar 4 analysis - measure of participation in Higher Education (HE) - was conducted on the postcode data. In this analysis statistical values called quintiles are used as classification measures, where quintile 1 is the lowest participating group (less than **20%** go to HE) and quintile 5 is highest participating group (over **50%** go to HE). The lower quintiles engaged with the Festival and in similar numbers as the highest 2 quintiles (Table 3), which shows that the programme appealed to an audience from a diverse array of educational backgrounds.

Table 3 showing a Polar 4 analysis on the Festival postcode data

Polar 4 quintile:	Postcode count:	Percentage:
0	1	
1	182	15%
2	281	23%
3	146	12%
4	229	19%
5	247	20%
-	131	



Figure 2 showing the reach of the Festival audience by postcode (n=1217)

Age

We achieved a relatively even split across the age groups, with a skew towards the younger age brackets (Fig 3). **48%** of attendees were aged between 16 and 34 – the target audience for the Festival. This is a **4%** increase from last year's Festival.

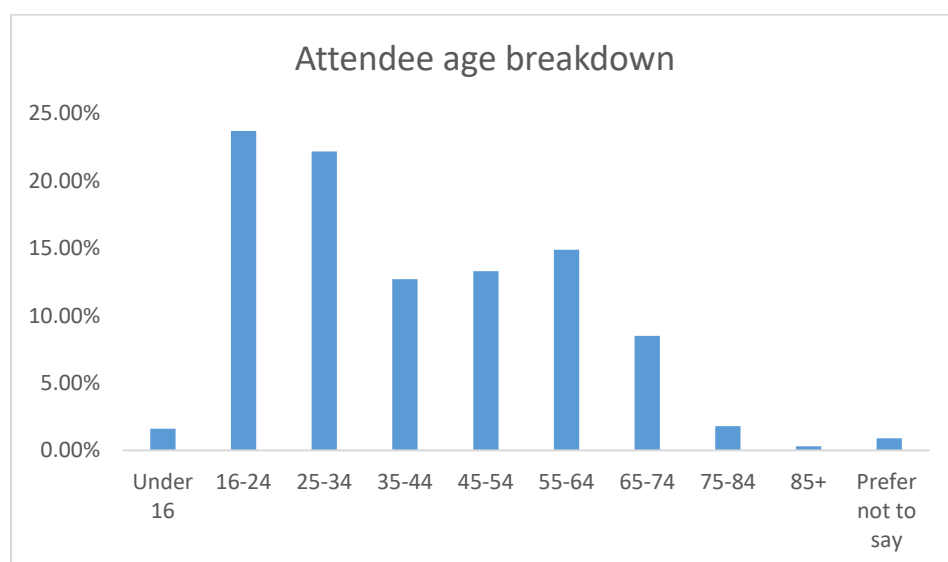


Figure 3 showing the age breakdown of the attendees (n=1174)

Gender

59% of attendees identified as female, **39%** as male (Fig 4). This compares to last year's Festival in which **52%** were female and **46%** were male. Next year we will try and ensure this ratio is more balanced and perhaps consider how some of the evening programme can appeal equally to those who identify as male.

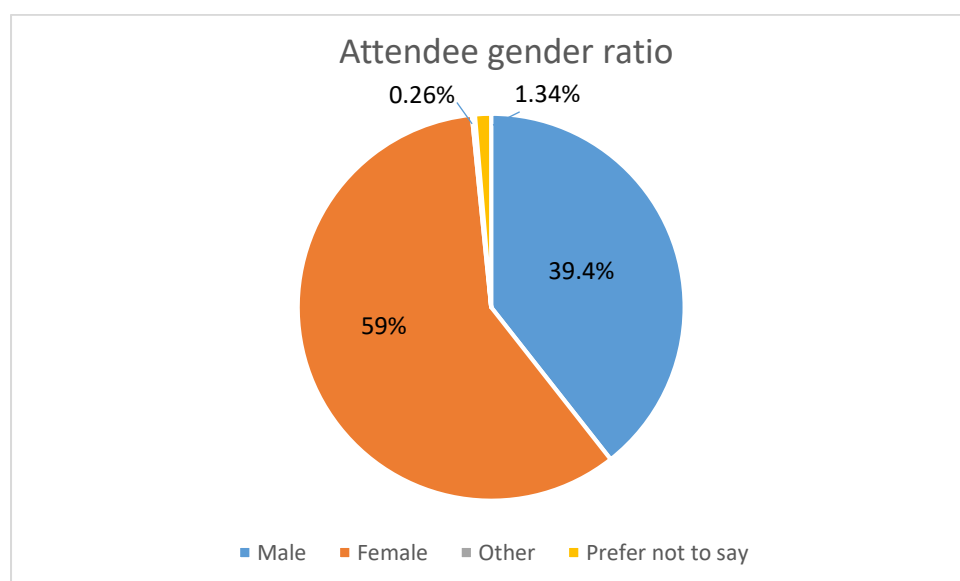


Figure 4 showing the gender of attendees n=1164

Sexual orientation

Around **80%** of the attendees identified as heterosexual. Just under **5%** identified as bisexual and just over **1%** identified as gay and lesbian (Fig 5). This is similar to the 2016 finding reported by the Office for National Statistics, that in the UK around **2%** of the population identified as lesbian, gay or bisexual. So that the 2019 Festival attracts this audience we will continue to programme events specifically for this community. The events at the 2018 Festival that were especially well attended by those who identify as gay, lesbian, bisexual and other, include 'A unifying theory of gay' and 'Out thinkers'. These events were specifically programmed with the LGBT+ community in mind. For these events (out of 26 responses), **30.8%** identified as either gay, lesbian, bisexual and other'. Encouragingly this suggests that our approach to targeted programming is working.

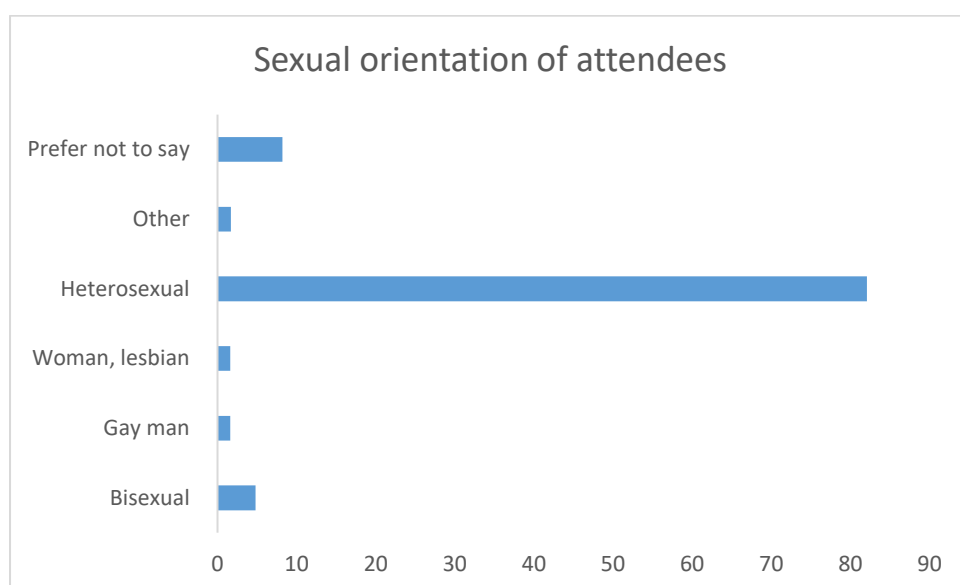


Figure 5 showing the sexual orientation of attendees (n=1123)

Ethnic background

89% of attendees identified as White, **1.9%** as Black/ Black British, **4.4%** as Asian/Asian British, **1%** as Mixed, and **1.8%** as Other (Fig 6). These results mirror the demographics for Kingston upon Hull as reported in the year 2011 by [The House of Commons Library](#) and the demographics for ethnicity as reported by the 2011 [Census](#) for England and Wales. In Kingston upon Hull, **92.4%** of the population identified as White, **3.5%** as Asian, **2%** as Black and **1.5%** as Mixed. This shows that we met our target of reaching audiences that represent the diversity of the local and national population.

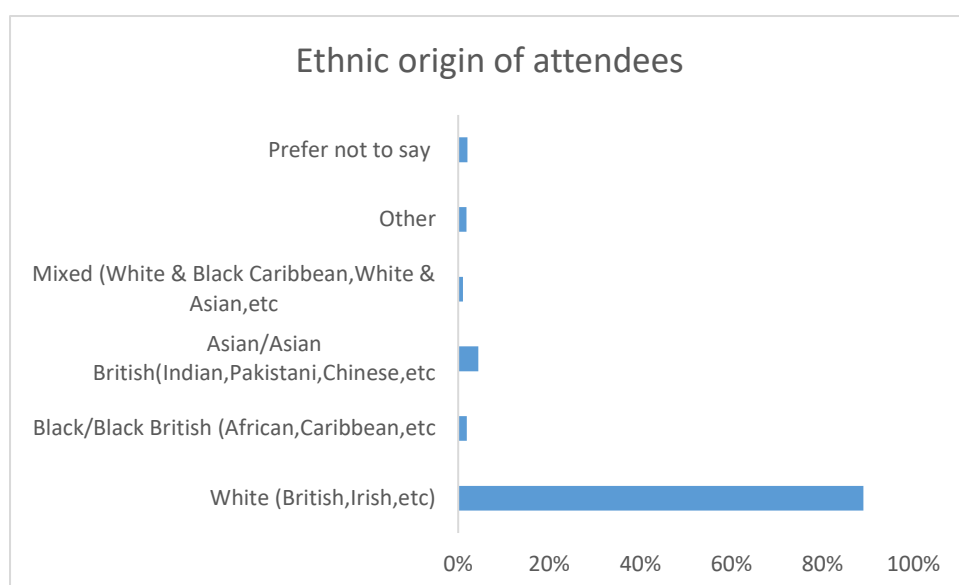


Figure 6 showing the ethnic origin of attendees n=1187

Disability

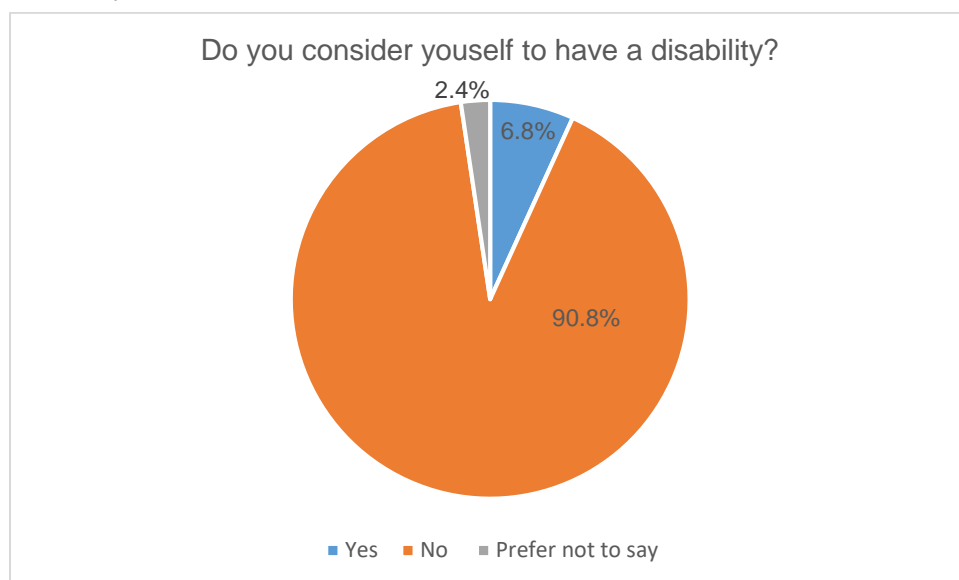


Figure 7 showing the percentage of attendees who have a disability n=1102

Relationship with science

The target audience of the Festival was 'Engaged' non-specialist adults with a broad interest in science and technology and 'Inactive' adults interested but unlikely to engage with science. The data showed that **24%** of attendees identified as 'Engaged', **33%** as 'Inactive' and **2%** as 'Not interested' (Fig 8). This makes **60%**, which suggests that we reached our target audience. **40%** identified as 'Professionals', those who produce or curate scientific knowledge or study science. Overall, compared to last year there is a greater portion of 'Professional' attendees and less who are 'Engaged'. Positively, there was a slight increase in 'Inactive' and 'Not interested' attendees (Fig 9).

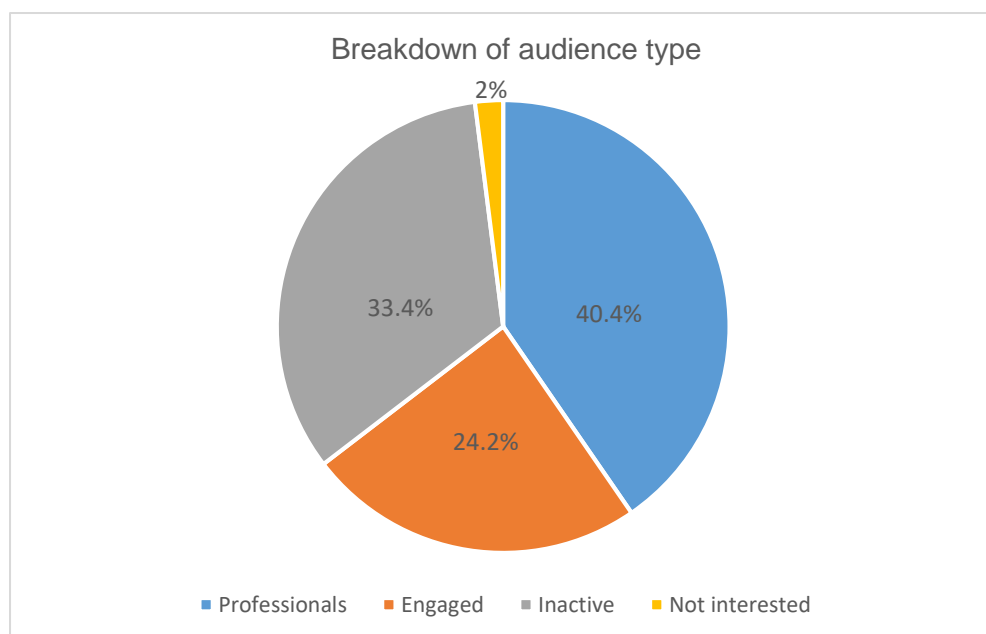


Figure 8 showing the attendees relationship with science n=1312

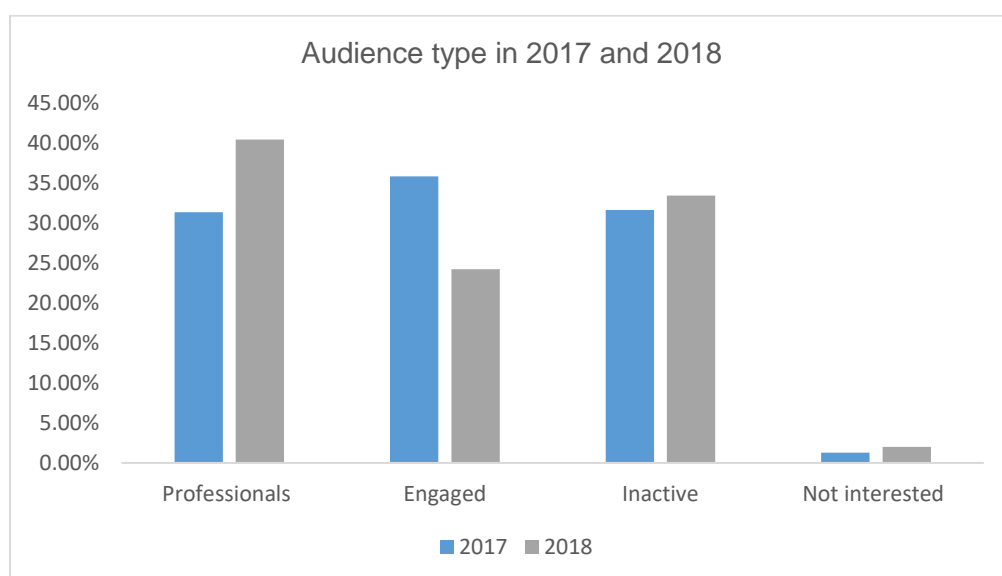


Figure 9 showing breakdown of BSF audience in 2017 n=2453 and 2018 n=1312

Reasons for attending event

The majority of attendees came to an event as they were interested in the subject, they typically enjoy attending science events and they wanted to learn something new. Other reasons for attending were mainly because they were on a school trip or the event was recommended to them (Fig 10). We received 7227 responses for this question and 3261 individuals filled out an evaluation form, which demonstrates that respondents came for more than one reason.

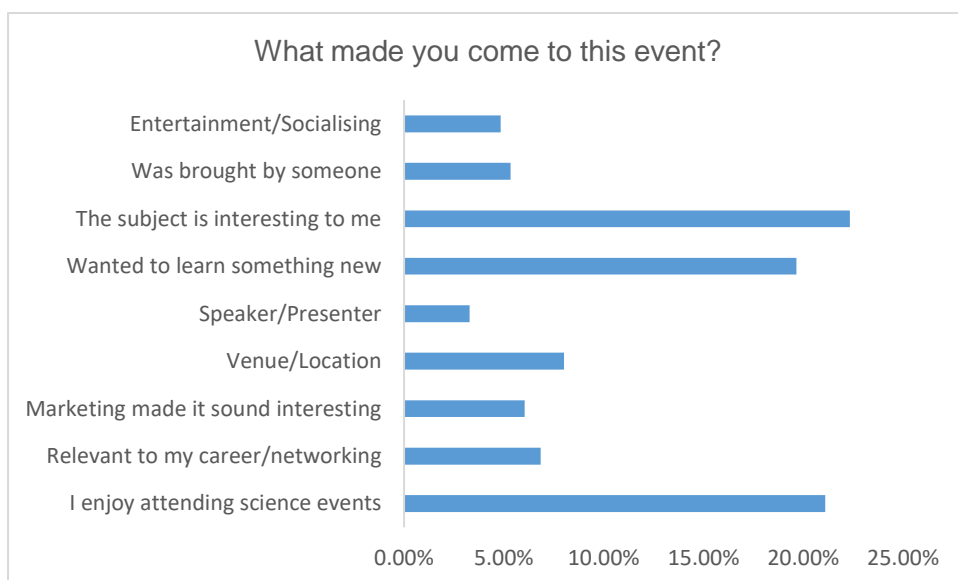


Figure 10 showing attendees responses to 'What made you come to this event?' n=7227

6.1.3 Attendees will have a positive experience of the Festival and feel more connected to science after attending Festival events

Event satisfaction rating

Satisfaction rates from attendees were very positive with **92%** rating events as excellent or good (Fig 11). This is only a slight decrease on last year's number of **93%**.



Figure 11 showing the event satisfaction of attendees n=3061

Looking at the comments from the very few people who rated events as poor or terrible, one of the main criticisms was that the content was limited. This suggests that this audience were likely 'Professional' attendees and had a greater understanding of the topic than the target audience ('Engaged' and 'Not interested').

Aside from 'interesting' and 'informative', 'inspiring' was one of the main comments from those who rated an event as excellent. Other words included 'thought provoking' and some stand out comments such as 'moving' and 'funny' (Fig 12). These words suggest a deeper connection with the content of the events.



Figure 12 showing the most popular words used by attendees to describe an event

The Festival programme had a positive impact on attendees' interest in science with **61%** stating that they felt more interested in science after attending the event (Fig 13). Around **80%** said that they would be attending more than one event (Fig 14), suggesting that the wider programme appealed to the majority of attendees. **78%** of attendees said that they would look out for and attend science events and activities in the future (Fig 15).

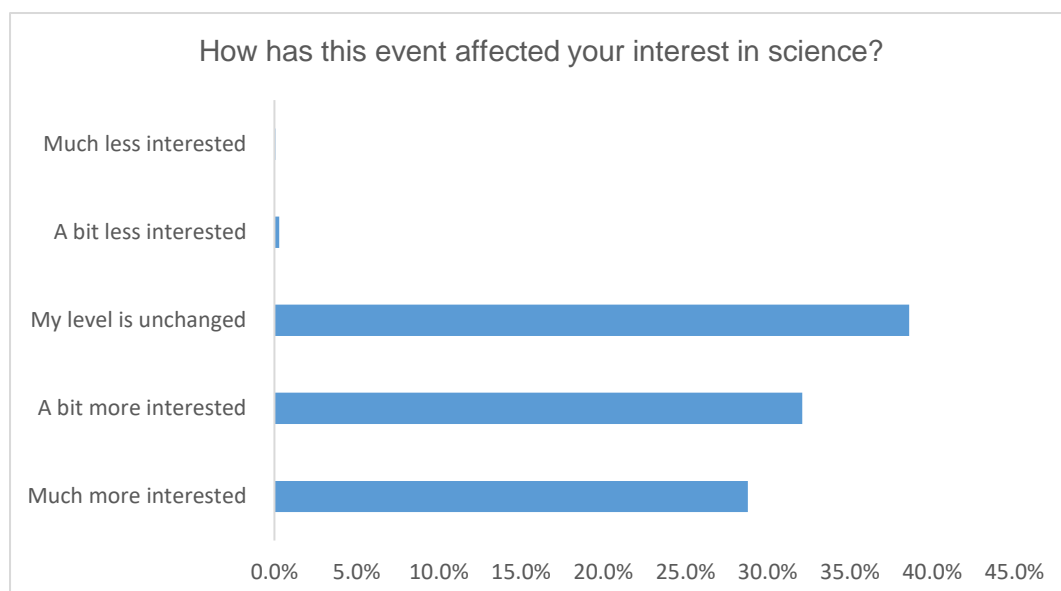


Figure 13 showing attendee responses to 'How has this event affected your interest in science?' n=2976

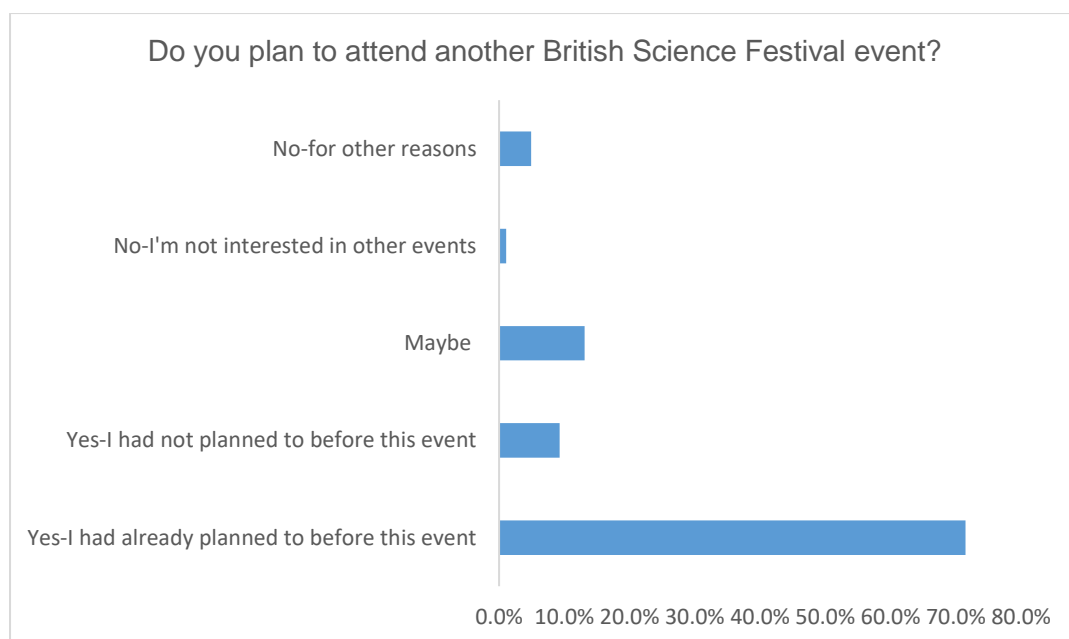


Figure 14 showing attendee responses to the question 'Do you plan to attend another British Science Festival event?' n=3074

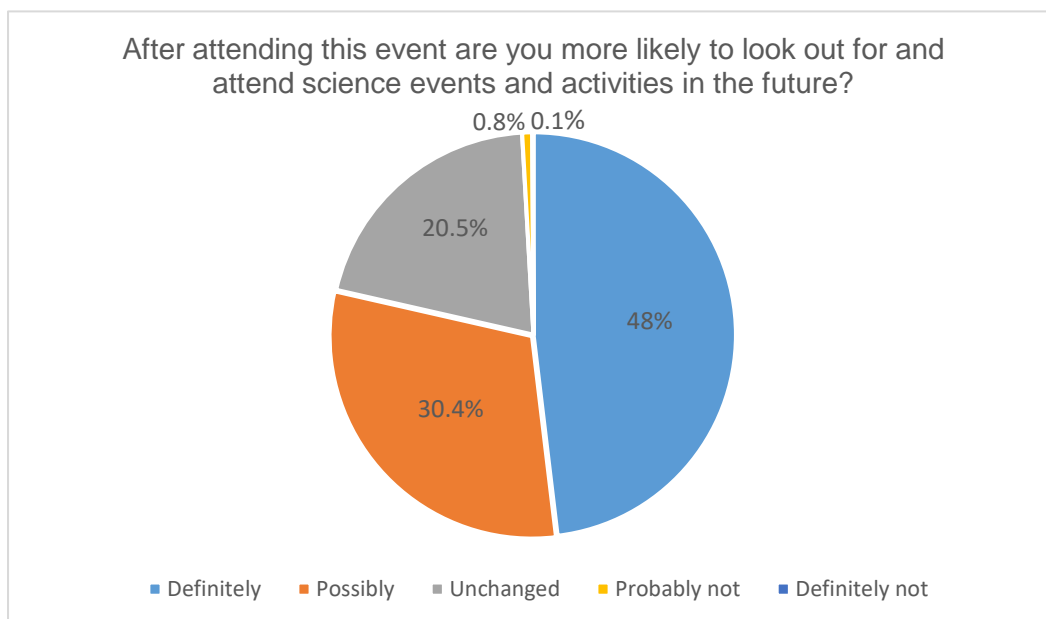


Figure 15 showing the likelihood of attendees looking out for and attending science events in the future n=2976

Anecdotal feedback

We do not have a section for free comments on the evaluation form as we do not have the capacity to analyse large amounts of qualitative data. However, we did collect some anecdotal feedback from attendees at community and evening events. Although the feedback will not be representative of all attendees, it suggests that we reached our objectives of providing a positive experience for attendees.

- **...‘it was a fantastic event and we have had amazing feedback both from staff and visitors.’** Feedback from a member of staff at The Deep.
- **‘I really enjoyed the week and well done to your team for all of your efforts.’** Feedback from a key sponsor.
- **‘It was any far the most successful evening program I have seen and we had some great laughs and fun along the way!’** Feedback from an attendee at A night at the Ropewalk.
- **‘Thank you! It was amazing - I loved it’** Attendee at UV yoga.
- **‘...thank you so much for having me and treating me so well...I met so many lovely people...’** Event organiser at Trinity after dark.
- **‘Thank you so much for giving me the opportunity to participate in BSF this year – it was a great experience and I’ve made some fab friends too!’** Feedback from an Award Lecturer.
- **‘I hope to have opportunities to participate in the BSA events for the future too’.** Feedback from a speaker.
- **‘It was magical, I even cried a little!’** Howl at the moon event attendee.

- ***‘That was different...unexpected.’*** Event attendee at Attraction explained: how to seduce and why we love.
- ***“This is our first experience of working with our audience employing science in project delivery. It was motivating and engaging to get people interacting throughout the event. We are so pleased to be involved in the British Science festival week event and looking forward to bigger events in the future.”*** Community event organiser.

6.2 Aim: To reinforce ‘Engaged’ audiences science identity



6.2.1 ‘Engaged’ attendees will have a positive experience of the Festival

Of 188 ‘Engaged’ attendees, around **52%** were either much more or a bit more interested in science after attending an event (Fig 16). No attendee became less interested. It is a promising finding that the majority, however slight, became more interested. This implies that the Festival events revealed something novel to them – whether that be the content discussed or the way the event was delivered. This is reinforced by the word cloud in Figure 17, which shows ‘interesting’, ‘informative’, ‘fascinating’ and ‘provoking’ as some of the most common words used to describe an event.

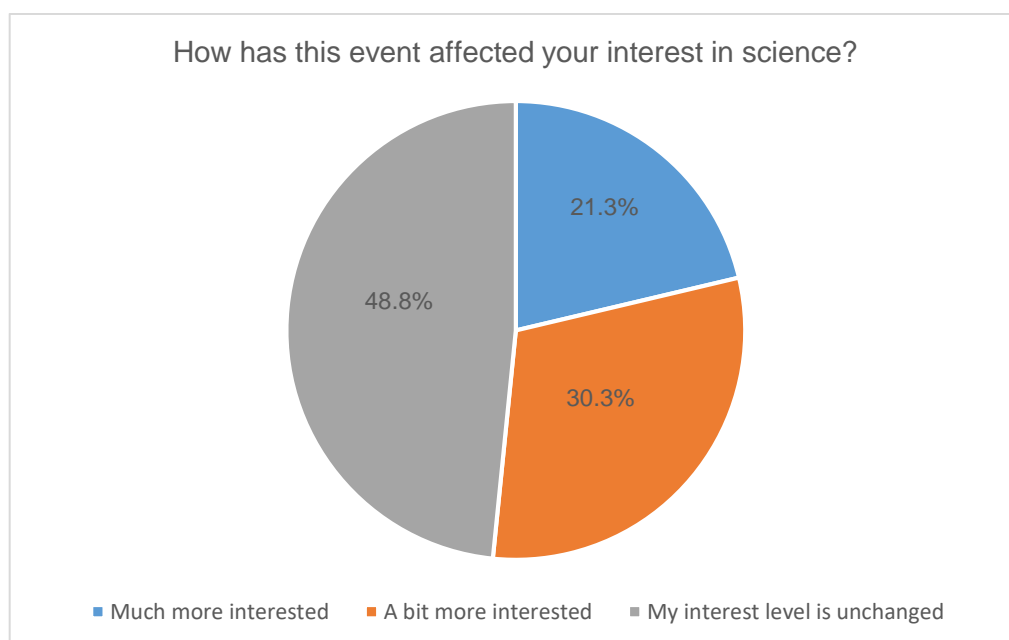


Figure 16 showing how an event has affected ‘Engaged’ audiences’ interest in science n=188

6.2.2 'Engaged' audiences attend multiple events

6.3 Aim: To encourage 'Inactive' audiences to feel more connected to science

24

6.3.1 'Inactive' audiences have a positive experience of Festival events

The 'Inactive' audiences made up the majority of the attendees in the off campus programme, with 'Professionals' being the second most common type of attendee (Fig 18). This was different from the campus event attendee profile where the most common types were 'Professionals' and 'Engaged'. There were 4338 attendees in total for the off campus events and we received 751 evaluation forms. The most popular words used to describe the events by attendees were 'Interesting', 'Informative' and 'Fun'. Overall, **92.8%** of attendees rated the events as either 'Excellent' or 'Good'.

6.3.2 'Inactive' attendees will feel more connected to science and more receptive to attending science events

The events off campus generally had a positive impact on attendees' interest in science. Notably, **66%** of 'Inactive' attendees reported some level of increase in their interest in science. This contrasts with 'Professionals' and 'Engaged' attendees which had a **53.8%** and **60.3%** increase in their scientific interest as a result of attending the events. 'Not interested' attendees had the greatest increase in their interest in science with **80%** saying they were either much or a bit more interested (Table 4). A big result on a small scale, this finding should be reflected upon with caution. Nonetheless, it is a welcome finding to know that the programme made an impact on even a few attendees attitudes towards science. Furthermore, **83.6%** of 'Inactive' attendees said that they had an increased likelihood of seeking out science events and activities in the future (Table 5).

<i>Excellent</i>	399	56.5%
<i>Good</i>	256	36.3%
<i>Average</i>	41	5.8%
<i>Poor</i>	10	1.4%
<i>Terrible</i>	0	0.0%
<i>Total</i>	706	100.0%

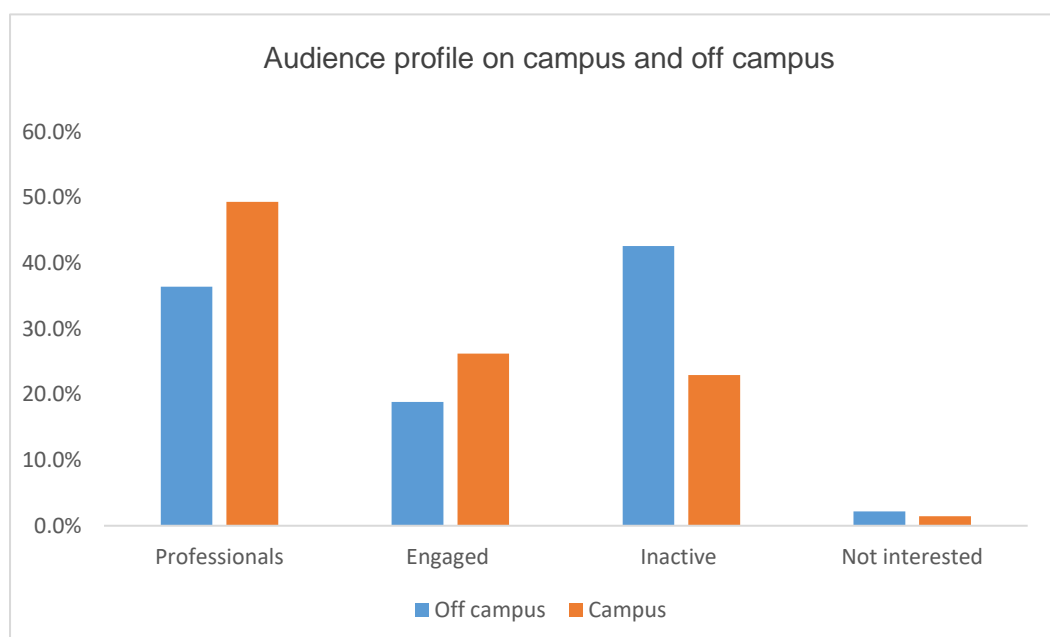


Figure 18 showing attendee profiles for the off campus events versus campus events, n=2137

Table 4 showing number showing attendee responses to the question 'How has this event affected your interest in science?', grouped by engagement profile of respondent

Response	Professionals (n = 240)	Engaged (n = 126)	Inactive (n = 282)	Not interested (n = 15)
I'm much more interested	22.9%	30.2%	17.7%	26.7%
I'm a bit more interested	30.8%	30.2%	48.2%	53.3%
My interest level is unchanged	46.3%	38.9%	33.0%	13.3%
I'm a bit less interested	0.0%	0.8%	1.1%	0.0%
I'm much less interested	0.0%	0.0%	0.0%	6.7%

Table 5 showing 'Inactive' attendees' responses to 'After attending this event are you more likely to look out for and attend science events and activities in the future?' (n = 287)

Response	Inactive
Definitely	37.3%
Possibly	46.3%
Unchanged	15.0%
Probably not	1.4%
Definitely not	0.0%

In terms of the attendee demographics for the off campus events, there were significantly more people who identified as female (**61.8%**) than male (**35.9%**) (n=1164). This is similar to the gender ratio of attendees for the whole programme, where **59%** of attendees identified as female, **39%** male. The majority of these attendees identified as ethnically 'White' (Table 6). There were notably more people aged between 25-34 attending the off campus events than for campus events (Fig 19).

Table 6 showing the breakdown of ethnic backgrounds from off campus event attendees (n=717) and all Festival attendees (n=1167)

Ethnicity	Off campus city event attendees	All Festival attendees
White (British, Irish, etc.)	90.5%	88.9%
Black/Black British (African, Caribbean, etc.)	0.8%	1.9%
Asian/Asian British (Indian, Pakistani, Chinese, etc.)	2.4%	4.4%
Mixed (White & Black Caribbean, White & Asian, etc.)	2.1%	1.0%
Other	1.5%	1.8%
Prefer not to say	2.6%	2.0%
Total	100.0%	100.0%

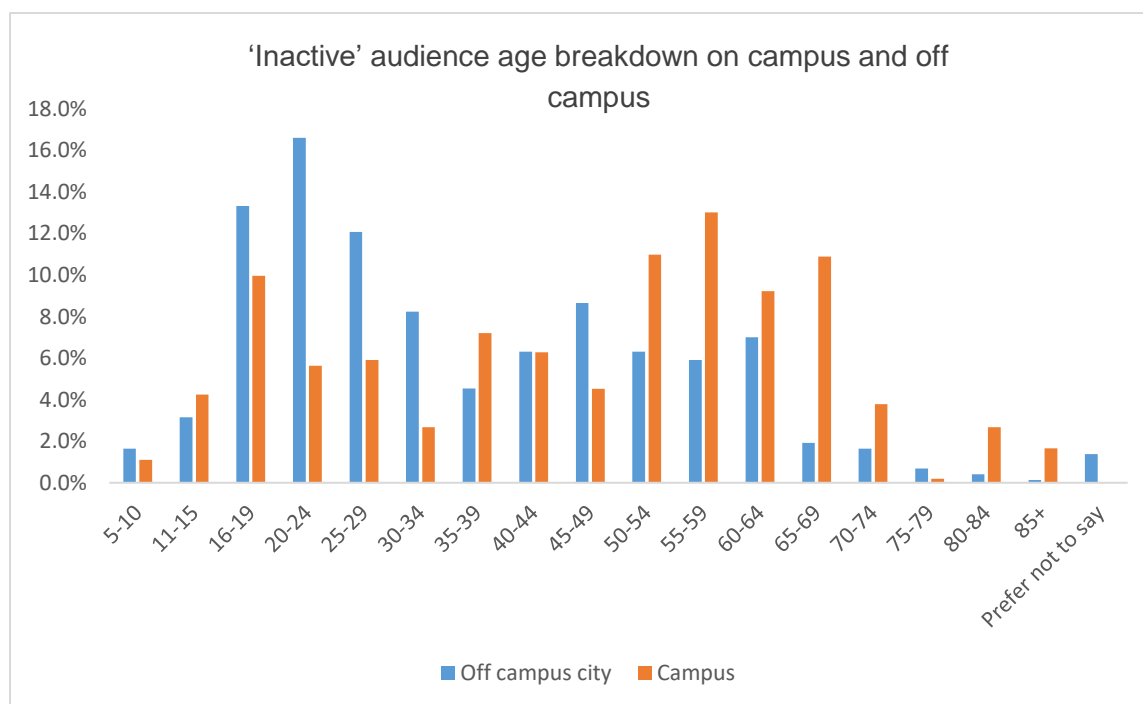


Figure 19 showing age demographics for off campus city events (n=728) compared to campus events (n=1083)

6.3.4 'Inactive' and 'Not interested' attendees will increase their interest in and understanding of science, and confidence in engaging with it through active participation in events that are tailored for them

The 'Not interested' audience was targeted through the community programme. The Festival provided grants of up to £500 to community groups and organisations in Hull and the Humber. The scheme aimed to empower and support groups to run their own science activities as part of the Festival, enabling new local audiences to engage with science through active participation in events that were tailored for them. For this scheme, groups that are underrepresented in science included:

- people who are Black Asian Minority Ethnic (BAME)
- people from economically disadvantaged areas
- young people facing adversity, including those not in education, employment or training (NEET)
- people with a disability, defined as a physical or mental impairment that has a substantial and long-term effect on someone's ability to do normal daily activities (Equalities Act 2010).

The community programme consisted of five events, which reached an estimated **462** people. **132** participants completed feedback forms. **50%** of participants identified as 'Professionals'. The majority of these attendees were in the 16-19 age bracket and were likely to be sixth form students studying a science subject. **5%** identified as 'Engaged' and **16%** identified as 'Inactive' attendees. **28%** identified as 'Not interested', which is significantly higher than the main Festival programme of **2%**. This demonstrates that localised, community led projects are the most impactful way of reaching this audience type. **42%** stated that they had not previously planned on attending a Festival event, but now would having experienced the community programme. This shows that the community programme succeeds in bringing individuals on campus that might not have normally engaged with the Festival.

Of those who do not work in a science related job, **90%** of attendees stated that they do not feel connected to science or that science isn't for them ('Inactive', **35%** and 'Not interested', **55%**). Of these 'Not interested' participants, **58%** reported an increase in their interest in science after attending their event. The demographic breakdown of attendees confirms that the programme successfully reached some groups that are underrepresented in science.

40% of 'Not interested' attendees identified as male and **59%** as female. Although reaching women and girls wasn't a specific target of this scheme, it is still positive to see such a high level of female attendees at the events. Ideally next year, we will reach an even split. **43%** of these attendees were from non-White ethnic origins. This compares to the ethnic make-up of Hull being **6%** non-White. This is a positive outcome of the programme and demonstrates the successes of targeted grant giving. Just **7%** considered themselves to have a disability. Participants who identify as having a disability is one of the target audiences, so it is unfortunate that this figure is not higher. However, as only one grant was given to a group that specifically works with a small amount of people with disabilities, this is to be expected.

Four of the five community event organisers completed a survey at the end of the Festival, and the data reveals that the programme had an impact on the community organisations and leaders as well as event attendees. Half of the organisations had previously run a science event before, and half of them had not, with all reporting that they are likely to run other science events in the future. One event organiser reported that they now have the confidence to run bigger projects, whilst another suggested they now had a stronger connection with the importance of science.

6.4 Aim: To encourage active researchers ('Professionals') to value and participate in public engagement.



6.4.1 The BSA will provide diverse opportunities for active researchers to engage with the public

In total, there were **191** speakers at the Festival. Of these, **72** spoke in informal and unique spaces across the city. Across the whole programme **37%** of the speakers were from the University of Hull and **63%** were from other institutions across the UK.

6.4.2 The BSA will programme events that reflect the diversity of current research and the people involved

The majority of speakers (**70%**) had not participated in the Festival before, this is a slight decrease from last year's result of **78%**, which suggests that although the programme is changing year on year, we need to ensure that we continue to diversify the speakers and event organisers to ensure we represent new voices. During the programming we aim for a 50:50 gender split of speakers and, while we did not give preference to events with female speakers, there was a policy of no all-male panel events. This year we achieved a very near equal male-female split; of 81 speakers, **50%** identified as male, **49%** as female and **1%** as non-binary.

A demographic questionnaire was included in the speaker survey and was answered by 61 people. This is unlikely to be representative, but as can be seen from Figure 20 researchers of varied ages spoke at the Festival. A large proportion of the researchers (just over **40%**) were aged 25-34, which interestingly is similar to one of the most common age brackets of the Festival attendees (Fig 3). This could mean that most of the attendees identified with the majority of speakers, in age at least.

Similar to last year's Festival, **83.3%** of the attendees were heterosexual and three attendees considered themselves to have a disability. The majority of speakers and organisers (**90%**) who completed the survey were from a White ethnic background (Fig 21). Although this resembles the ethnicity profile of Hull and the Humber, it is important to ensure that the speakers we programme represent and celebrate diversity as much as possible and that we continue to increase the diversity within future Festivals.

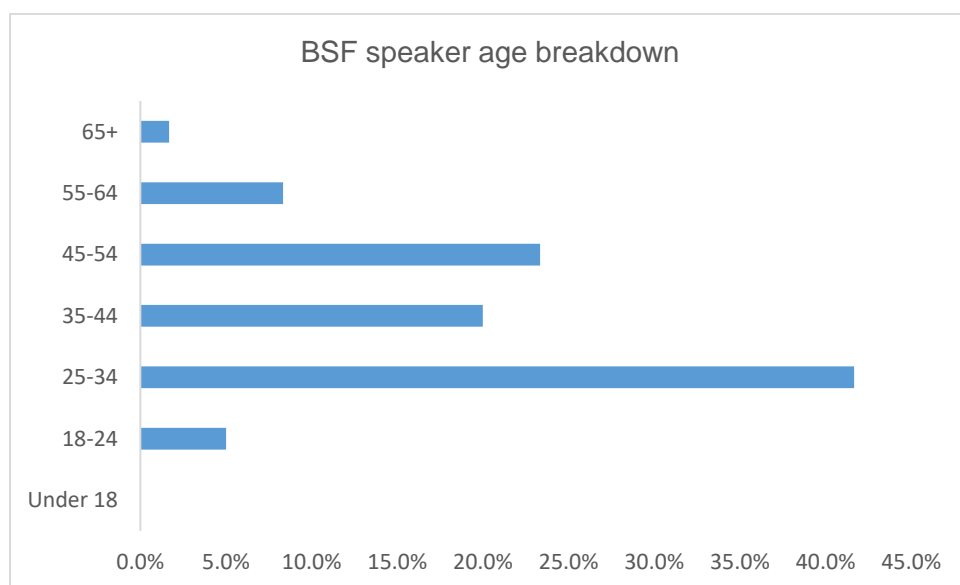


Figure 20 showing the age breakdown of the Festival speakers n=61

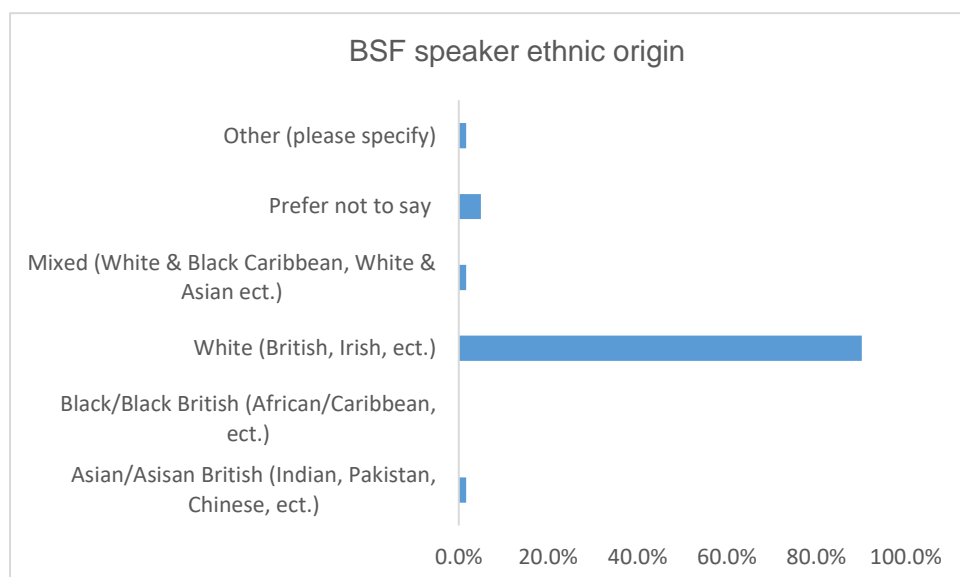


Figure 21 showing the ethnic origin of Festival speakers $n=61$

6.4.3 Speakers will have a positive experience of the Festival

92% of the speakers would rate their experience at the Festival as either excellent or good (Fig 22). **68.9%** would definitely recommend contributing to the Festival to a colleague (Fig 23).

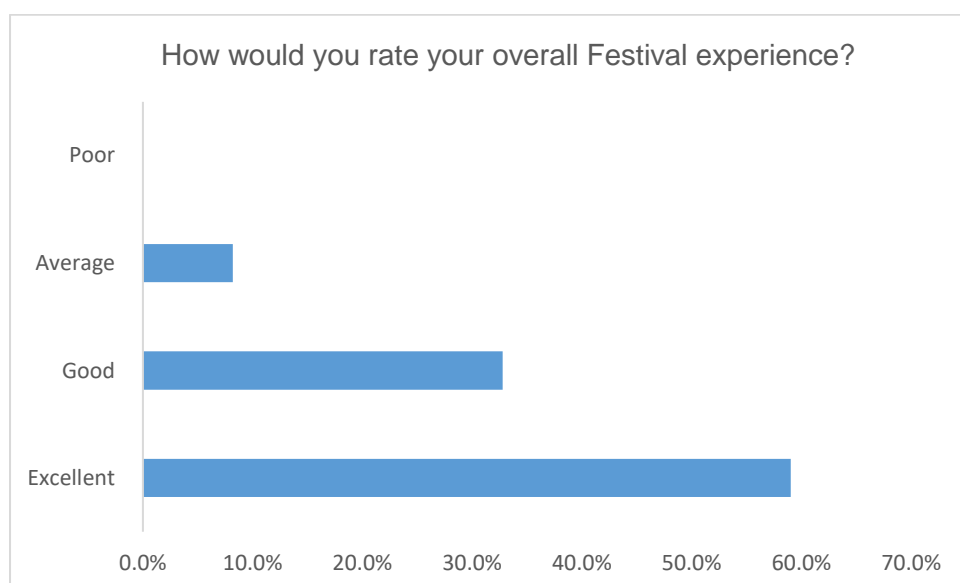


Figure 22 showing speaker responses to 'How would you rate your overall Festival experience?' $n=61$

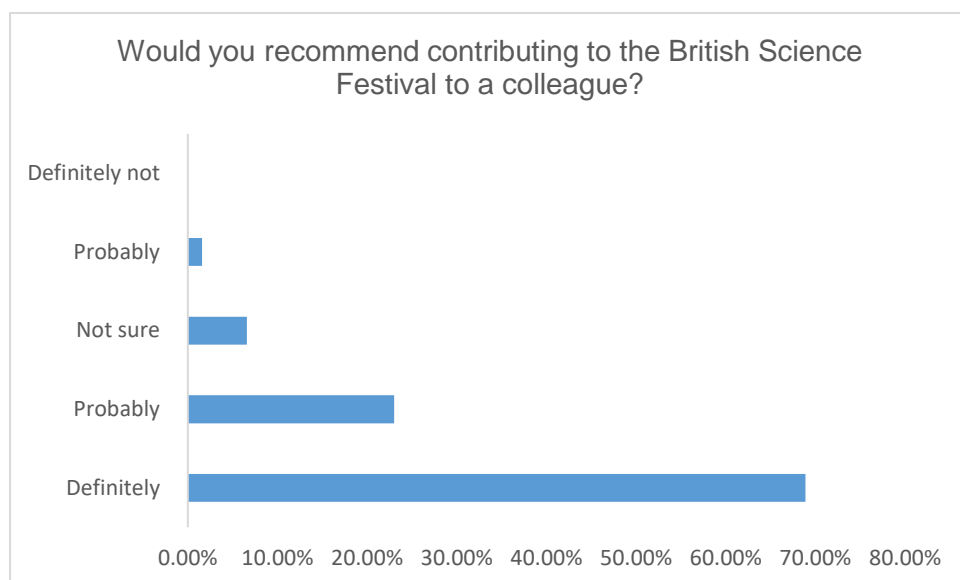


Figure 23 showing speaker responses to 'Would you recommend contributing to the BSF to a colleague?' n=61

6.4.4 Speakers will feel more confident engaging with the public and will engage with the public more frequently as a result

Training days for advanced presentation skills were offered to all Hull researchers. Although the uptake for this was low, those that did attend benefited greatly. The workshops gave them a chance to develop the narrative and format of their events and learn how to present for a Festival stage instead of a University lecture.

For all speakers who answered the survey, **64%** stated that they had become more confident in engaging the public after contributing to the Festival. Before the Festival **90%** of the attendees were already either very or somewhat confident engaging with the public. This suggests that attendees gained a valuable experience.

6.4.5 Speakers will have increased awareness of public perspectives

80.3% of speakers became more aware of public views on their subject after participating in the programme – a **6%** increase from last year's Festival.

6.5 Aim: To facilitate lasting relationships between the Universities, researchers, partner organisations and local community



6.5.1 Provide a positive experience for venues so that they will be open to hosting future science events

The British Science Festival travels to a new UK city every year and we hope that the excitement and willingness to attend science events stays with the city long after we have gone and that there is a legacy to the relationships that we build. Although we do not collect formal evaluation data from our venues and partners we do ask for informal feedback, which was unanimously positive. There were a few partnerships, with whom we held evening events with, which were particularly impressed with the development and delivery of the Festival events and will be adopting some of these formats in the future, including the Deep aquarium.

7. Conclusions and recommendations for 2019

It was a fantastic opportunity to build on the programme of events that took place during Hull's year as UK City of Culture. There was a real sense that the attendees to the 2018 British Science Festival had an appetite for cultural events and an openness for trying new activities. Looking ahead to next year's Festival, hosted by the University of Warwick, it is a great chance to build key partnerships and instil a sense of excitement before Coventry, as the new UK's City of Culture 2021, takes centre stage for a much-anticipated programme of arts and cultural events.

Recommendations for 2019

- **Increase 'Not interested' audiences**

While we know that this will be challenging - we should continue to increase engagement with 'Not interested' audiences through the community programme. Although comparatively this programme did not reach as many people as the main programme of events, the impact it had was impressive – with a high proportion of 'Not interested' attendees stating that they would be more likely to attend science events in the future.

- **Creative partnership working**

Freedom Festival was a key partnership for the 2018 British Science Festival. Working together in collaboration with this arts and culture Festival enabled us to create a unique evening 'set piece' (Howl at the Moon). Popular words used to describe this event include 'beautiful', 'moving' and 'atmospheric'. The programme should showcase events that make our audience feel something and working in partnership with a cultural organisation can help achieve this. In light of this, we should aim to establish a key partnership in Coventry and Warwickshire that enables us to programme a 'set piece' i.e. a large-scale cultural event that connects people to science and elicits an emotional reaction. This will work towards the BSA's vision of science being engaged with as a cultural activity.

- **'Young creatives' youth panel**

To increase events suitable for young people at the Festival, we are keen to support and develop a BSF 'Young creatives' panel, with ages ranging from 16-20, to develop content for the BSF and help make decisions regarding programming. The aim is that young people from a variety of backgrounds and BSA audience types will be recruited onto the panel. They will be given a venue to develop content for and will meet monthly in their local area in the run up to the 2019 Festival.

- **Speaker diversity**

In line with the BSA's mission to champion diversity and inclusivity in science, every effort will be made to ensure that the speakers at the 2019 Festival represent diversity in its fullest capacity. The Festival provides a national platform and as programmers we have the opportunity pave the way in showcasing and celebrating diversity within science. This year we have set a challenge for change to the BSA's Scientific Sections and have sought their input regarding how to field diverse candidates for the 2019 Presidents.

- **Evaluation form**

Last year it was recommended that a question be added to the evaluation form asking if attendees work at the host university. This is interesting for general impact but could help us to monitor the non-science staff attending events and their reasons for attending. This question wasn't added to the form this year due to limited space, however it should be included in the form for 2019.