



The BA Festival of Science 2005

Evaluation report



The BA and the BA Festival of Science

The BA (British Association for the Advancement of Science) exists to advance the understanding, accessibility and accountability of the sciences and engineering. We aim to promote openness about science in society and to engage and inspire people directly with science and technology and their implications. We endeavour to do this through events, award schemes, public consultations, science in society activities and by encouraging and assisting scientists to communicate their research.

The BA Festival of Science is the flagship event of the BA. Each year the Festival is hosted by a different university, usually in the UK. The Festival aims to engage as many people as possible with science and in discussions and debates about the applications of science, and its impact on our society. The four programmes (the main programme, the Science in the City programme and the two young peoples' programmes) interact with each other to present opportunities to people of all ages and backgrounds to interact with the Festival.

Background to the BA Festival of Science in Dublin

The BA Festival of Science 2005 was held in Dublin after discussions between the BA, Dick Ahlstrom of the Irish Times, Trinity College Dublin and the Office of Science and Technology. The timing of the Festival in Dublin was considered to be appropriate considering Ireland's commitment to building a robust knowledge-based economy and the relatively recent introduction of a science curriculum in primary schools. It was hoped that, although the Festival was held in Dublin, organisations over the whole of Ireland would support the Festival and become involved in the programme, planning and promotion of the event.

"Congrats to Trinity for attracting the BA to Dublin after almost half a century."
Attendee

Key supporters

The BA Festival of Science in Dublin was supported by:

Trinity College Dublin
Discover Science and Engineering
Department for Education and Science
Science Foundation Ireland
Intel
AstraZeneca

RCUK
Institute of Physics
Higher Education Authority
IEE
Royal Society of Chemistry
Failte Ireland

Key targets and objectives for 2005

Quantitative objectives

Programme	2005 target	2005 actual
<i>Festival core (adults)</i>	4000	} 39,264
<i>Festival fringe (all)</i>	10000	
<i>Festival schools (8-12 years)</i>	3000	4340
<i>Festival schools (12-14 years)</i>	1000	576
<i>Festival schools (14-16 years)</i>	700	1365
<i>Festival schools (16+)</i>	300	660

Qualitative objectives

Objective	Action
Hold Festival x-change	<i>4 x-change events held at Festival. Good attendance at all events</i>
Hold BACkchat at Festival to explore issues as well as to inspire teenagers with S&T	<i>IntelBACkchat held Monday – Friday with a wide range of participants (analysis in appendix 7)</i>
Run City programme in Dublin focusing on reaching audiences unlikely to go to the University and include a large family event	<i>Events took place in various venues in Dublin, including clubs, meeting squares and museums. Family science day was held at the RDS on Sunday</i>
<i>Identify & devise appropriate events for 3 audience groups in the local community in Dublin to further diversity</i>	<i>Grosseteste dialogues targeted religious groups, family science day for families, several free events</i>
Run Perspectives at Festival	<i>35 posters exhibited at Perspectives by scientists from across all of RCUK</i>
Use the Festival to engage young people with real scientists via hands-on programme and Backchat.	<i>Programme of events developed and delivered in September 2005</i>
Involve young people from schools in 'challenging circumstances' in hands-on events	<i>Funding from DCU and TCD Access programmes allowed almost 2000 young people from disadvantaged schools to come to the Festival</i>
Continue to ticket for events where feasible & devise policies to encourage excluded audiences	<i>Festival was a mix of paid and free events, paid events were considered reasonably priced for Dublin with substantial discounts for students</i>
Run four science communication working lunches at Festival	<i>Five lunches were held at the Festival</i>

The four programmes

The main programme

There were 101 events in the main programme which took place on the campus of Trinity College Dublin (TCD).

Of the 101 events 41 were organised by the BA Scientific Sections and 28 were organised by TCD. Organisers of the remaining events included the University of Limerick, Women in Science and Technology, ESRC Risk Network, Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN) and the European Dana Alliance for the Brain.

Audience

The majority of organisers of events in the main programme this year were pleased with the audience they attracted. 69% of organisers who completed a questionnaire after their event declared themselves 'fairly satisfied' or 'very satisfied' with the audience they had.

There was however some polarisation in audience numbers with some events becoming overbooked and some events having less than 10 attendees. Reasons for this could be that the less popular events were timetabled against too many other, more popular events; that little or no marketing of some individual, more specialised events was done in advance or that the marketing was misdirected; that the event was too specialised to appeal to a general audience, but not specialised enough to appeal to a professional audience. It should be noted however that some of the less popular events gained good press coverage.

A continuation from last year of grading events according to suitability for certain audiences was on the whole very successful with less people commenting that the content of events was inappropriate.

Science in the City

There were 85 events in the Science in the City programme. There was a good variety of event formats from exhibitions, to debates, talks, 'star' speaker events and workshops. Topical events, such as a debate on the effects of the smoking ban, ran alongside sci-art events such as a reading and discussion on the science in the works of Flann O'Brien.

The City programme was co-ordinated by Brian Trench, Head of Communications at Dublin City University (DCU) and Philip O'Reilly, a DCU MSc graduate in Science Communication. A committee was formed to inform and guide the City programme on community outreach and event formation. The Committee's mission was:

To bring science into Dublin city spaces and venues; to engage a broad general audience across all demographic groups and to promote dialogue and cultural contextuality of science in society during the BA Festival of Science

Audience and outreach

The committee met as a working group to target specific publics, create events, form partnerships and broaden audience attendances for 'City' events. It identified the following groups as marginalized and thus to be targeted:

- (1) Black and minority ethnic (BME) groups
- (2) Specific age groups: (a) 18-25 year olds, (b) families & (c) retired people
- (3) Economically disadvantaged
- (4) Publics of various education levels
- (5) Social and cultural special interest groups

See appendix 5 for the full committee report.

The evaluation of the City programme shows mixed success in meeting these targets.

(1) BME groups

Ireland is not particularly ethnically diverse. BMEs include the UK and other EU countries (3.4% of the total population), Asia (0.5%), Africa (0.5%), non-EU European countries (0.5%) and the United States (0.3%).

(2) Specific age groups

Events staged for particular age groups were successful. The Particle Plays workshop specifically targeted young people was successful in terms of attracting a brand new audience and the Leviathan Science Cabaret and the City Club attracted a young audience. Family Science day was a great success in terms of the numbers attending. Retired people made up a good proportion of many of the events.

(3) Economically disadvantaged

The evaluation shows that the majority of people who attended were in the ABC1 demographic. Clearly making events free of charge does not necessarily widen the audience, and more direct contact with potential audiences will be needed in future to encourage them to attend.

(4) Publics of various education levels

The evaluation suggests that the majority of people attending events were well educated. More effort needs to be made in future to attract early school leavers, and people in the C2DE demographic.

(5) Social and cultural interest groups

The success of the fieldtrips suggests that people who were interested in archaeology and history attended the Festival in some numbers. Literary events also worked well.

The Science in the City programme was considered a great success by the people involved and generated a great deal of enthusiasm both in terms of organisations wanting to be involved in events and from

"Good for general public. Excellent discussion"
Attendee

cultural, scientific and social organisations in the local area. While such enthusiasm is very welcome, there is a danger that the programme can become unmanageable, both in terms of the number of events exceeding potential audience numbers and in

terms of causing some confusion about roles and responsibilities of organisers, venues and partners. This could be minimised by ensuring that any partnerships are developed early on in the process and by streamlining and improving the process by which organisations can propose events for the programme, being clear about the level of commitment involved and the extent to which the co-ordinators will or will not become involved in the delivery of events.

Schools programme – Ages 8 – 14

The programme for school groups aged 8-14 was extremely successful, with record numbers of attendees (see appendix 6 for numbers). There were 28 events running over four days of the Festival. The awareness-raising campaign for the young people's programme included hosting a stand at the Irish Young Scientists Exhibition and a presentation at the Irish Science Teacher Association (ISTA) AGM, as well as editorial in the Irish Times and Science Spin and through the skool.ie website.

Disadvantaged groups

The Young People's Programme received support from TCD and DCU Access programmes to assist schools in disadvantaged areas in coming to the Festival by paying their entrance fees and travel costs. In all, 1885 children from disadvantaged groups were able to attend the Festival because of this assistance.

Teachers evening

96 teachers attended from as far as Wexford, Wicklow, Sligo, Kildare, Meath, Kerry, Mayo, Laois and Longford. 75% of these teachers were primary and 25% secondary. Presentations were given on the evening by Discover Science and Engineering, Bio-Rad and the BA, and teachers were given the opportunity to try out investigations, as well as visit the hands-on exhibition, Science Bus and Lab in a Lorry before these events opened to the public. All teachers received a teacher's pack which included materials on running science clubs, a CD of project ideas to carry out investigations with their students and further support on teaching science in the classroom.

Events

Events in the young people's programme ranged from workshops for small groups, to large science shows. The events covered all aspects of science, technology and engineering.

Workshop providers and sponsors

One of the strengths of the BA Festival of Science is that it is a unique opportunity for people, organisations and groups to work together, towards a common goal. It gives smaller organisations the opportunity to expand and develop their outreach programmes. Holding the Festival in Dublin also added the advantage of bringing together organisations from the Republic of Ireland, Northern Ireland and Great Britain, sharing ideas and resources.

Schools programme – Ages 14 – 19

In response to feedback from attendees and event organisers in the past, the BA reconsidered its programme for teenagers. The programme was divided into two – a

programme for ages 14-16 and a programme for ages 16-19. The programmes for teenagers were a combination of events in the main

"They made me more interested in science"
IntelBACKchat attendee

programme considered suitable for the age group and events specifically formulated for the audience. In the programme for ages 14-16 54% of the event opportunities were specifically formulated for that age group; in the case of students aged 16-19, 35% of the event opportunities were events specifically devised for the age group.

See appendix 6 for an analysis of evaluation data from the teenage programmes.

Both groups were included in IntelBACKchat which ran at lunchtime, Monday to Friday. A full report on IntelBACKchat can be found at appendix 7.

"My co-presenters and I were pleasantly surprised by the level of interest with which our work was received, the high standard of the discussion and the diversity of the audience, which added to the quality of the debate. I found the event stimulating, in fact, more stimulating than many academic conferences that I had frequented to present my work."

Presenter

Practical aspects of the Festival

Venue

The TCD campus is ideally situated in the centre of Dublin. It also has an illustrious history and many organisers and presenters felt that this added something extra to the Festival.

The city centre location also meant that there was a significant increase in 'passing trade' and a greater crossover of attendees between the main and City programmes. All elements of the programme, apart from the hands-on exhibition, were accommodated on campus. A marquee was hired to house the exhibition and it was felt that having this visible to people on the campus added to the overall 'feel' of the Festival.

More large, flat spaces would have been useful for workshop and seminar type events.

Signage

Special signs for the Festival were erected around the site. Most people who were unfamiliar commented that the signs were helpful in navigating the site. Some comments were made that it would have been good to highlight the Festival by having signs around the perimeter of the campus. Signage within the buildings again was lacking in some instances and more effort to remedy this will be made in future years.

Booking and ticketing

Over the last few years the way in which the Festival has been ticketed has evolved from a conference booking system into a more festival-like approach. This means that more and more people are booking into specific events rather than opting for a weekly or daily pass.

Booking systems

There are four main methods of booking:

1. Online

The online booking mechanism was tweaked following the implementation of a new system in 2004. There were significantly more online bookings than in previous years, with 1183 people using the online booking system compared to 666 last year. Efforts will be made to continue to direct people towards the website for booking and to enhance the system for both attendee and in-house use.

2. By telephone

This was again a very popular method of booking. One of the advantages of telephone booking is that attendees can find out more about the events by talking to the Festival Assistant taking the booking. This method is however quite time consuming for the Festival Assistant. About 600 people booked by this method from the beginning of May, with the main concentration of bookings in August.

3. In person in advance

The Temple Bar Information Centre was our local ticket outlet in Dublin and distributed 577 tickets. It was important to have a ticket outlet located in the city as booking by telephone meant an international call for people living in Ireland.

4. In person during the week

The box office on campus was extremely busy all week, with a steady amount of passing trade as well as weekly pass holders looking for more information.

Student assistants

Student assistants were recruited through TCD. Although there was some concern that we would not have enough assistants, a last minute recruitment drive meant that we had sufficient assistants in the end. TCD AV services felt that 2 assistants were needed per venue, one to deal with attendees and one dedicated to the AV equipment. While most assistants were happy with the hours they received there were instances, specifically amongst assistants not from Dublin who were paying their own expenses, when the assistants felt that they did not work enough hours to justify their expenditure. This specifically affected those assigned to the city programme and young people's programme.

Accommodation

University accommodation this year was very central. Feedback shows that it was of mixed quality, with equal numbers of unprompted comments being very negative and very positive. The accommodation was more expensive than in recent years, which some attendees commented on.

Box office

The registration area was centrally located on the campus in a specially constructed box office. Sunday and Monday were particularly busy with long queues forming as staff dealt with attendees wishing to book for several events.

Speakers' lounge

The speakers' lounge was located fairly centrally and provided access to computers and refreshments for all presenters and organisers. The room was used by many organisers, but, as in previous years, too many speakers did not go there to register, maybe because of time restraints, or because many of the presenters were TCD.

University steering committee

The university steering committee met once a month with academic staff and service staff being well represented. The monthly meetings provided a good overview for all those involved, with smaller groups meeting to discuss specific areas of organisation.

Press centre and media coverage

The Festival is the major media event in the science calendar, with over 200 journalists from print, radio and TV registered to use the Press Centre, many staying for the entire week. Media coverage in 2005 was extensive: 15 national newspapers covered the Festival, with over 180 articles (up 15% on 2004), including front page stories in the Guardian, Daily Telegraph and Daily Mail amongst others. Hundreds of articles appeared in the regional media and many others in trade and general consumer publications. There were more than 120 radio broadcasts and over 20 TV items. The audience reach daily over the week is therefore many millions. In addition there were almost 500 web stories.

BA Events

Science in Society

The BA Science in Society team ran a series of events and workshops throughout the Festival. These were:

The x-change (4)
Working lunches (5)
Perspectives poster competition

The x-change was once again a very popular part of the Festival programme. The venue was of a suitable size and was full each evening. However there was no bar in the venue, so a temporary bar had to be brought in. Also the AV required for the x-change was over and above what could be provided by TCD, so was hired from an external company.

The series of Working Lunches were held off campus at St Andrews Resource Centre, Pearse Street, as requested by ScienceWise who supported the Working Lunch programme.

Five working lunches were held covering the following topics

- Finding funding (gift aid and grant applications)
- The public value of science (discussing the new Demos pamphlet)
- Running science events
- Working with media partners
- Facilitation techniques

Overall responses to the working lunches were very positive. 81% were either satisfied or very satisfied with the working lunch with 8% being neither satisfied nor dissatisfied and 11% being not very satisfied. The main reason for dissatisfaction was the venue, particularly the fact that it was off campus. 10 people included additional information on their feedback sheets noting this, advising against this approach for the future.

Perspectives is a poster session with a difference. It aims to encourage young post-graduate and post-doctoral scientists, engineers and social scientists to explore the social and ethical implications of their research. For the first time this year the project was funded by RCUK so the breadth of science covered was significantly broader. This year 46 applications were submitted, of which 35 were selected as finalists and invited to design and exhibit a poster at the Festival. All finalists stood by their posters on Wednesday and Thursday afternoon to talk to Festival attendees, and a drinks reception for sponsors and invited guests took place in the poster exhibition on Wednesday evening. The posters were judged by a panel of judges and cash prizes were awarded to an overall winner, 5 runners-up and a people's choice award. Winners were announced at the x-change on Thursday night, and the overall winner gave a press conference about her research on Friday. Feedback from

finalists indicated that they most enjoyed communicating with new audiences whilst at the Festival, however the majority of finalists would have liked more visitors to the *Perspectives* exhibition.

The public visitors said that they found the exhibition enjoyable; they found the topics interesting and enjoyed talking to the young researchers. Members of the public could also vote for their favourite poster and 127 votes were cast in the people's choice. The main reason for their vote was that they had an enjoyable conversation with the researcher. The scheme will run again next year.

Festival set pieces

Presidential address

The Presidential address was attended by over 300 people. Press coverage of the content of the address unprecedented, with 53 stories. This was expected to be the case because of the high media profile of Professor Winston.

Honorary degree ceremony

The honorary degree ceremony was, in a departure from previous years, an invitation only event. This caused some dissatisfaction among some attendees at the Festival, particularly those who have attended the Festival for some years.

Festival dinner

The Festival Dinner was this year entirely funded by TCD and was a very popular occasion. The BA had only a limited number of tickets available which again was the cause of dissatisfaction amongst Section members, long-time BA supporters and staff.

BA Open Forum

The BA Open Forum was attended by about 30 supporters of the BA. A useful discussion, led by Professor Patrick Dowling and Sir Roland Jackson about the future direction of the BA, took place. Attendees were requested to submit feedback about specific Festival-related issues on feedback forms.

The evaluation

Demographic information

This was collected at the point of booking, both online and by telephone. We had 1073 respondents to this questionnaire. The full results can be found in appendix 3.

Evaluating events

Observer evaluation – both main programme and city events

BA staff and officers and student assistants were asked to evaluate any events they attended. On the whole feedback was positive, both about the content of the event and the suitability for the audience.

“This is a difficult subject to make interesting, but it was!”

Attendee

Attendee evaluation – main programme events only

Attendees at events were asked to complete evaluation forms about the events they attended. The feedback on the whole was very positive, with over 90% of respondents rating events as excellent or good in terms of topicality, interest, how informative it was, the clarity of the science and overall organisation. However areas which didn't score so highly were how interactive the event was (50% said excellent or good) and how entertaining the event was (73% said excellent or good).

Why did people come to the Festival?

The main reasons for people attending Festival events were either an interest in the subject being discussed or an interest in science in general. Other reasons include work (25%), and for educational reasons (2.9%). Other reasons included trying something different, just dropped in, and being brought to the event by somebody else.

How did people find out about events?

35% of respondents said that they found out about the Festival from the main programme and 11% found out on the BA website. It is unlikely however that all of these people picked up the main programme, or visited the website without seeing any reference to the Festival beforehand through some other medium (Irish Times adverts, bus and DART advertising etc). Many people also found out about the Festival through word-of-mouth (14%), work or school (11%) and e-marketing (6%).

Presenter evaluation of the Festival

Presenter evaluation – main programme presenters only

Over recent years some effort has been made to broaden the range of presenters we have at the Festival. Within the City programme this has to a great extent been achieved by including politicians, artists, pressure groups and industry. The main programme, unsurprisingly, has a more academic slant with 59% of presenters from academia. 13% of respondents were from Research Institutes, 8% from industry, 6% freelance writers, 4% professional science communicators with the remaining presenters from museums, campaign groups, international organisations, hospitals and schools.

Other presenter statistics

Male	62%	White british	55%
Female	38%	White Other	24%
		White Irish	15%*
Aged 25-44	57%	Black	2%
Aged 45-64	43%	Asian	2%
		Caribbean	2%

* it seems likely that a greater proportion of speakers were White Irish, but as a significant number were TCD staff, they may not have used the speakers lounge and therefore will not have completed the evaluation form.

The most popular reason for presenting was to raise the profile of science, followed by discussion of their work, then because they were asked and lastly to gain media coverage.

On the whole presenters were happy with the information provided by the BA and the event organisers, especially with regard to the focus of their event. The overall happiness with the size of the audience and with the quality of the discussion is slightly lower at 85% and 87% respectively. About 90% of presenters rated their experience of the Festival as excellent or good. However, only 69% of respondents would recommend the Festival to a friend or colleague, and 74% would not have come had they not been presenting.

“Wonderful festival. I would come for a longer time next time and attend more sessions. Did not know how good it would be but it was terrific.”
Presenter

Attendee feedback

Questionnaires at Open Forum and in main box office

As attendees were encouraged to tell us about any areas of organisation they wanted to highlight, the results from this part of the evaluation have been incorporated into Appendix 9 of this report.

Science in the City evaluation

The City programme was evaluated by Victoria Thompson, who had just completed a MSc in Science Communication at the University of Bath. The evaluation used three methods: a paper questionnaire to be completed by attendees; semi-structured interviews with participants and observations carried out by the evaluator.

The aims of the City programme evaluation were to monitor:

- the quality of events
- attendance at events
- diversity of attendants (ethnicity, age, gender)

The evaluation summary of the City programme is in appendix 4 of this report.

Publicity

Initial leaflet

The aim of the leaflet was to start to raise awareness that the Festival was happening in Dublin in September.

The initial leaflet was produced in January 2006. It was distributed through the BA supporter network, at the ESAT BT Science Fair, through TCD Faculty of Science.

ESAT BT Science Fair

The Festival of Science team had a stand at the fair where we encouraged students to complete quizzes or questionnaires, and try some simple science experiments. The purpose of this was to raise awareness of the Festival amongst teachers, older students and parents. This was very successful with almost 500 school children

taking part in the quiz or questionnaire and significant interest in the Festival from teachers and parents.

ISTA (Irish Science Teachers Association)

The BA gave a presentation about the Young People's Programmes at the conference, as well as hosting a stand where teachers could pick up more information.

Science Spin magazine

Science Spin has a readership of approximately 50,000 per issue. Readers include decision makers, researchers, secondary school pupils and teachers all over Ireland. Science Spin carried editorial in the April/May issue and an advert and 2 pages of editorial in the June/July issue and the August/September issue.

Irish Times

The Irish Times was very supportive of the Festival and produced editorial for the young people's programmes at a very early stage. They also offered a very good deal on advertising space in the weeks leading up to the Festival with advertising space worth over €30,000 given as in-kind support for the Festival.

Buses and DART

We advertised on the side of buses in Dublin, as well as in the carriages of the DART. This advertising undoubtedly raised the profile of the event, but it is unclear how much of this translated into actual ticket sales.

Posters

TCD produced posters which were placed in venues around Dublin, as well as around the University campus. Again this worked well as general awareness-raising about the Festival.

Event specific promotion

Organisers of events were encouraged to promote their events through their own publicity channels. The BA publicised individual events, or groups of events on special interest websites, and by e-marketing.

Radio advertising

A radio advert promoting the Festival ran for the week before the Festival.

E-marketing

Information about the Festival was sent out on various e-mail lists after research by the Press Assistants.

Main programme

The main programme was available at Trinity College, the Temple Bar Information Centre, through the BA and in libraries across Ireland.

Science in the City programme

50,000 copies of the City programme were produced, 25,000 of which were distributed to homes in Dublin through a specialist distribution agency.

Conclusion

Holding the BA Festival of Science outside the UK presented many opportunities and challenges. There is no doubt that the Festival managed to tap into a desire by the Irish public to engage with science, and found substantial interest and support from the Irish political and scientific communities. Subsequent indications are that many of the people and organisations involved are now committed to providing more opportunities for public interaction with science, technology and engineering in the future.

Appendices:

No.	Appendix	Page
1	Attendee numbers	15
2	Event evaluation	16-20
3	Evaluation figures	21-23
4	Summary of findings of the evaluation of Science in the City	24-26
5	Science in the City community liaison and outreach	27-30
6	Evaluation of the teenage programme	31-33
7	Evaluation of IntelBACkchat	34-35
8	Last year's recommendations and actions	36-39
9	Actions for future years following feedback from staff, attendees and organisers	40-41

Appendix 1 Attendee numbers

	2005	2004	2003	2002	2001	2000	1999	1998
adult paying	4707	3357	966	1246	951	1446	1287	845
other adult*	1962	1534	1592	1495	2037	1418	1312	1365
sub-total	6849	4891	2558	2741	2988	2864	2599	2210
14 – 19 programme**	2296	1507	1041	1542	978	1300	2478	1039
Non ticketed events ****	18,749	22,456	1270 (Science on Sunday)	n/a	n/a	n/a	n/a	n/a
total	33,677	28,854	4869	4283	3966	4164	5077	3249
Hands-on programme***	5373	3165	3389	4555	4914	4300	6093	3500
Press	214	220	180	156	322	322	250	250
GRAND TOTAL	39,264	32,019	8,258	8,838	8,880	8,464	11,170	6,749

*includes organisers, BA staff, officers, speakers, Section committee members, student bursaries, student assistants, press and Trinity College Dublin staff and students

** includes teachers accompanying 15 – 19 and all helpers

*** includes all young people, teachers, staff and presenters

****this figure includes 1000 people who stopped and interacted with the exhibition in St Stephen's Green Shopping Centre, 50 people who looked at an exhibition in the ENFO Offices, 500 people at the Visions of Science exhibition in the Filmbase gallery, 300 people who visited Save the Robots exhibition at The Ark, 3176 visitors to the exhibition at the National Museum of Natural History, 12866 visitors to the Book of Kells and associated exhibitions, 100 people at the Marsh's Library exhibition and reported numbers of people at some non-ticketed events, or people who turned up to free (but ticketed) events without booking.

- Numbers of people who interacted with the BA Festival of Science exhibitions around the city cannot be known with any accuracy.

Appendix 2 Event evaluation

Observer evaluation

This year the evaluation form asked observers (BA staff and Festival assistants) to judge how full the venues were during events. This method of measuring attendance levels allows us to consider the popularity of events. Some events were aimed at smaller, more specialised groups and were therefore allocated appropriate venues.

Attendee figures	Percentage of events
Less than ¼ full	11
¼ to ½ full	11
½ to ¾ full	17
¾ to full	61

The BA Festival of Science is committed to producing events which are interesting, informative and appropriate for the audience. Observers were asked to rate the event in terms of its content.

Description of event	Percentage
Interesting	81
Informative	76
Entertaining	27
Old news	1
Dull	0

The BA Festival of Science is also concerned that presenters at the Festival are effective communicators, able to present their research to a general audience. Observers were asked to assess the presenters on this basis.

Description of presenters	Percentage
Good communicators	79
Poor use of AV	4
Entertaining communicators	31
Engaging communicators	36
Poor communicators	1
Some good, some bad	6

The BA is keen to encourage more organisers and presenters to incorporate some element of audience participation into their events.

Level of audience participation	Percentage
Just questions after each presentation	60
General discussion	22
Structured debate	4
Audience participation	14

Number of attendees in events

Event Name	Attendees
A carnival of the senses: How the human senses influence each other	100+
Africa's rainbow revolution: Is science helping to alleviate poverty in Africa?	100+
Albert Einstein: A 20th century icon	100+
An evening with Richard Wiseman and Simon Singh	100+
Celebrity diets, obesity and hormones: What does science have to say?	100+
Coping with uncertainty	100+
Daphne Jackson Trust drinks reception	100+
Different interests, common future? A debate on achieving an effective and sustainable labour immigration policy in Ireland	100+
Do you feel lucky?	100+
Does science have the answer to cancer?	100+
Dublin Castle reception	100+
Einstein and astronomy	100+
Einstein's legacy	100+
Enzymes: Nature's nanomachines	100+
Family Science day	100+
Hitchhiker's guide to the Universe	100+
Hypnosis: Myth or miracle?	100+
Making a mockery of molecules: Science in Flann O'Brien's comic novel	100+
Maths goes to Hollywood	100+
Maths that changed the World	100+
Nanochemistry: the science where physics, chemistry and biology meet	100+
Professor Robert Winston: the man, the media and making babies	100+
RCSI Investigates: Forensics Pathology and DNA Fingerprinting	100+
Science on a nanoscale	100+
The BA Charles Darwin Award Lecture: Cell suicide, execution and downright murder - prolonging life by understanding death	100+
The BA Charles Lyell Award Lecture: Ireland's hidden depths	100+
The BA Isambard Kingdom Brunel Award Lecture: The future of civil aviation - the approach of the silent aircraft	100+
The BA Joseph Lister Award Lecture: Life-swapping in cyber suburbia - the problem of stolen identity and the internet	100+
The BA Lord Kelvin Award Lecture: Living with a star - a new encounter with our dynamic sun	100+
The BA Presidential Address	100+
The future of medicine: Stem cell and gene therapy	100+
The genetics of brain wiring	100+
The legacy of Hamilton	100+
The top spin of a quark: a puzzle?	100+
Turning up the volume on scientific debate	100+
Viruses: The deadly enemy	100+
Welcome reception	100+
Why we should love the photon	100+
21st century transplantation	50-100
A window into the brain	50-100
A year in the life of an athlete	50-100
Archaeological fieldtrip to Boyne Valley, County Meath	50-100
Beyond the human genome	50-100

Event Name	Attendees
Citizenship, science and education	50-100
City club (Friday)	50-100
City club (Monday)	50-100
City club (Thursday)	50-100
City club (Tuesday)	50-100
City club (Wednesday)	50-100
Climate change begins at home	50-100
Common genetic variants and disease risk	50-100
Dublin and the new physics	50-100
Ethics in research	50-100
Firms and markets: From local to global	50-100
Fishing for answers: How can we use the seas sustainably?	50-100
Global biological change and sustainability	50-100
How can maths help solve crime?	50-100
Is a cure for arthritis in sight?	50-100
Is there a future for energy crops?	50-100
Ivory towers or corporate boardroom: Distinct research careers?	50-100
Just say nano!	50-100
Knowing your self better: Psychological investigations of the ego	50-100
Layers of the cultural mind	50-100
Leviathan: Science cabaret	50-100
Literature and science: A pocketful of death - horology and writing in the English Renaissance	50-100
Literature and science: Encounters with the sea mouse	50-100
Literature and science: Poems of science (and scientists)	50-100
Literature and science: 'Techné' and other poems	50-100
Literature and science: 'What a piece of work is a man' - sixteenth century science and the nature of humankind	50-100
Molecular magic for modern medicine	50-100
Primate social cognition: What monkeys and apes know and feel about each other	50-100
Rewriting the history of life: Exceptionally well-preserved fossils and our understanding of evolution	50-100
Rodney Brooks: what if robots rebel?	50-100
Science of cultural heritage preservation	50-100
Secrets of manuscripts revealed: recent advances in the field of manuscript research	50-100
Setting the menu for health: Design your own health campaign	50-100
Setting the menu for health: How do we change your mind?	50-100
Should we believe the children?	50-100
Should we enhance ourselves: does nanotechnology have limits?	50-100
Sláinte to our good health	50-100
Sun, Moon and meteorites: quest for our origins	50-100
Tackling the world's great neglected diseases	50-100
The allergy epidemic: Will a worm a day keep asthma at bay?	50-100
The highs and lows of brain research	50-100
The problem of prejudice	50-100
The science of Irishness	50-100
Using gene expression to understand cancer	50-100
Water on Mars	50-100
What's in a word?	50-100
Who sets the agenda for science?	50-100
Will robots inherit the Earth?	50-100

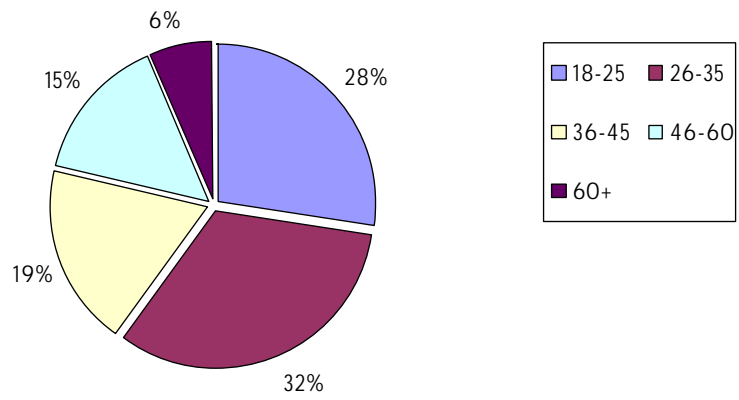
Event Name	Attendees
Women in Science and Technology: Making a difference	50-100
Chester Beatty Library behind the scenes	20-50*
Chester Beatty Library guided tour	20-50*
Chester Beatty Library guided tour	20-50*
Chester Beatty Library guided tour	20-50*
Ingenious Dublin walking tour (Monday)	20-50*
Ingenious Dublin walking tour (Sunday)	20-50*
Ingenious Dublin walking tour (Thursday)	20-50*
Ingenious Trinity tour (Friday)	20-50*
Lessons of the smoking ban	20-50*
Natural History Museum tour (Monday)	20-50*
Natural History Museum tour (Sunday)	20-50*
Natural History Museum tour (Tuesday)	20-50*
River Dodder fieldtrip	20-50*
River Dodder fieldtrip	20-50*
Working lunch: Facilitation techniques	20-50*
Working lunch: Running successful science events	20-50*
Working lunch: The public value of science	20-50*
Working lunch: Working with media partners	20-50*
An audience with Frances Cairncross	20-50
Archaeological fieldtrip to County Roscommon	20-50
Archaeology: Who sets the agenda?	20-50
Are we taking the right medicines?	20-50
Association of British Science Writers seminar	20-50
Awards for presenting heritage research	20-50
Building Stones of Dublin: a geological walk	20-50
Café scientifique: Science Promise vs Science Reality	20-50
Discovering archaeology with the Discovery Programme	20-50
Dublin: Visible history in the modern city	20-50
Forestry plantations: green deserts, or oases of biodiversity?	20-50
Fraud, faction and the anthropological imagination	20-50
Genetics and the horse	20-50
GPS treasure hunt	20-50
How to get the most out of scientists: An event for journalists and science writers	20-50
Inside Bell Labs	20-50
Irish industry and engineering	20-50
Irish Innovators in Science	20-50
Is engineering ingenuity?	20-50
Materials and methods for the 21st century: The first decade	20-50
Particle plays: Physics in 3 minutes	20-50
Plant hunting & animal collecting: Still essential?	20-50
RAI Curl Lecture: Headwaters of the past - Ethnoecology, memory, and the struggle for nature in a western Amazonian landscape	20-50
Remotely interesting	20-50
Science and the public in Ireland: a historical perspective	20-50
Science communication and the internet revolution	20-50
Science in fiction	20-50
Science promise vs Science reality: Biomarkers & tailored medicine	20-50
Sonic art: Sound of the future	20-50
The BA Open Forum	20-50

Event Name	Attendees
The face in mind	20-50
The role of zoos in the 21st Century	20-50
Wildlife of Irish forestry plantations	20-50
Workshop on the science, morals and ethics of the start of life	20-50
A walk in the Nanoworld (Friday)	>20*
A walk in the Nanoworld (Monday)	>20*
A walk in the Nanoworld (Thursday)	>20*
A walk in the Nanoworld (Tuesday)	>20*
A walk in the Nanoworld (Wednesday)	>20*
DISC workshop	>20*
Natural History Museum tour (Friday)	>20*
An Ethnographic Film Showing	>20
Pathology, pathologists and public confidence	>20
Putting science in its place	>20
Risky Business: gambling on biotechnology	>20
Working lunch: Finding funding part II	>20
Gattaca: Open-air screening	Cancelled
Private science, public circus	Cancelled

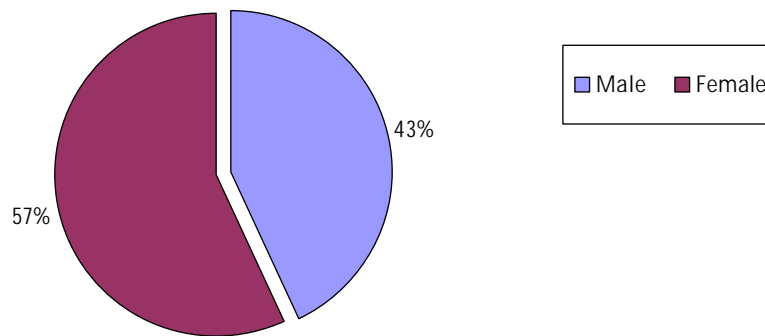
* Events marked with an asterisk (*) were for limited numbers and had sold out.

Appendix 3 Evaluation Figures for the BA Festival of Science 2005

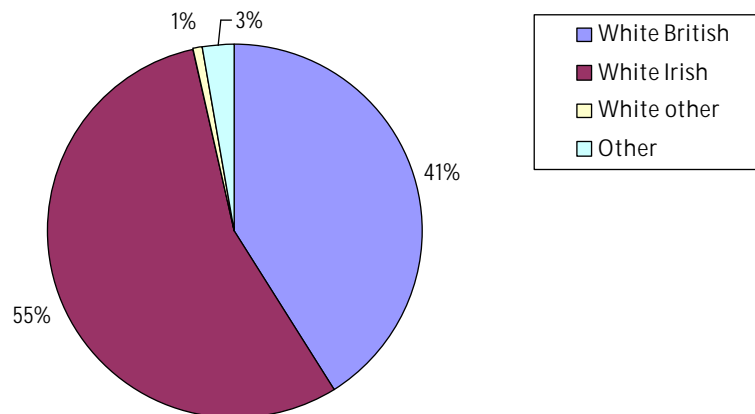
Age Range of Attendees at the BA Festival of Science 2005



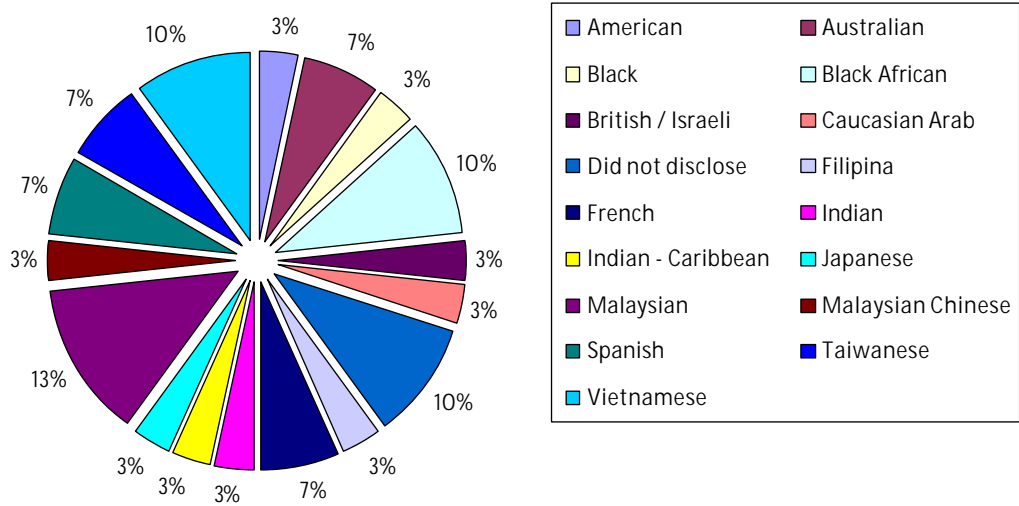
Attendee Gender Split at the BA Festival of Science 2005



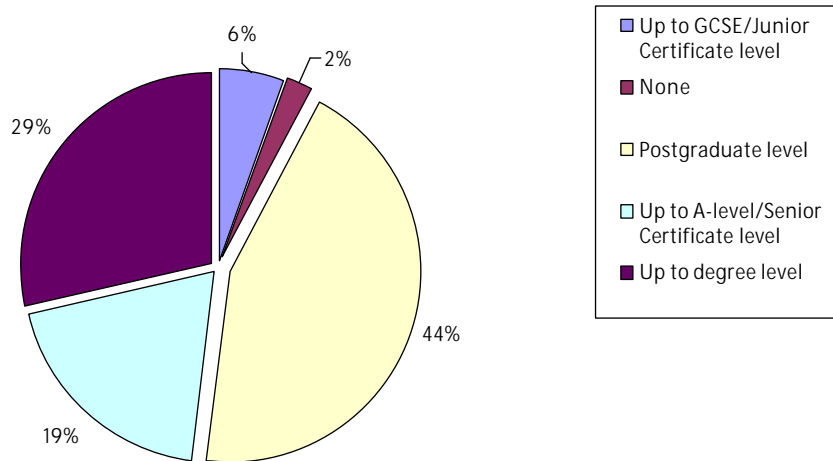
Ethnicity Range of Attendees at the BA Festival of Science 2005



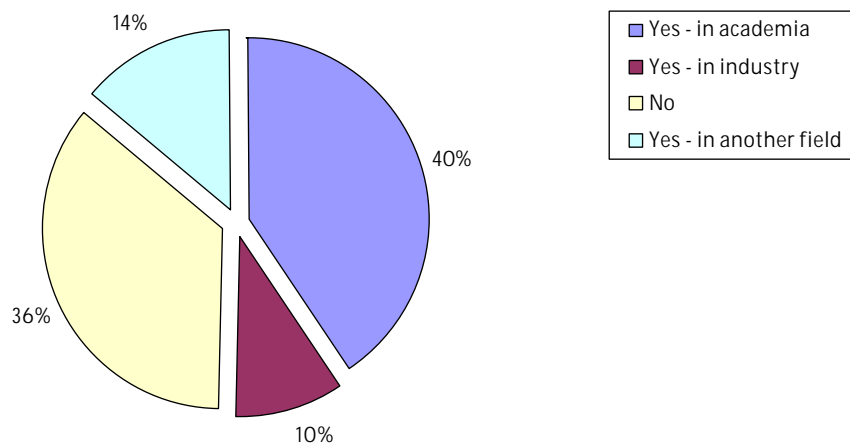
Ethnicity Range of Individuals Categorised as Other



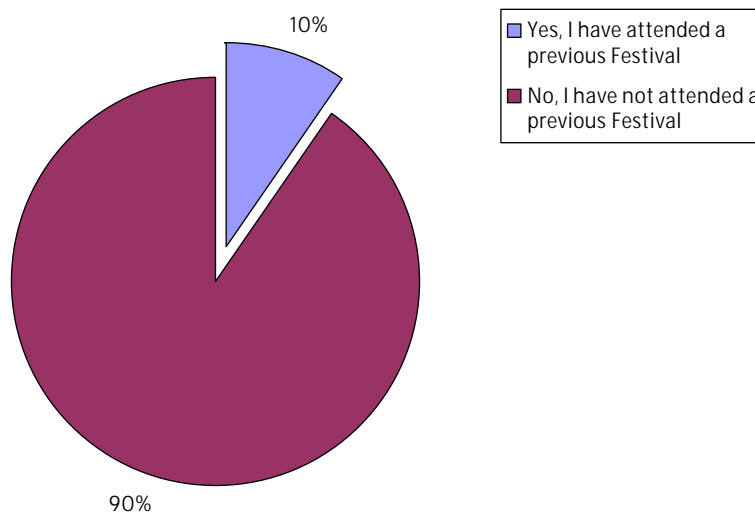
The Level of Science Education in Individuals who visited the BA Festival of Science 2005



The Percentage of BA Festival of Science Attendees with a Career Directly Related to Science



Percentage of Individuals who have Attended the BA Festival of Science in the Past



Evaluation data collected via:

- Paper questionnaires completed at TCD
- Website questionnaire which is part of the online booking system
- Telephone questionnaire, asked when booking for tickets

Appendix 4 Summary of findings of the evaluation of Science in the City

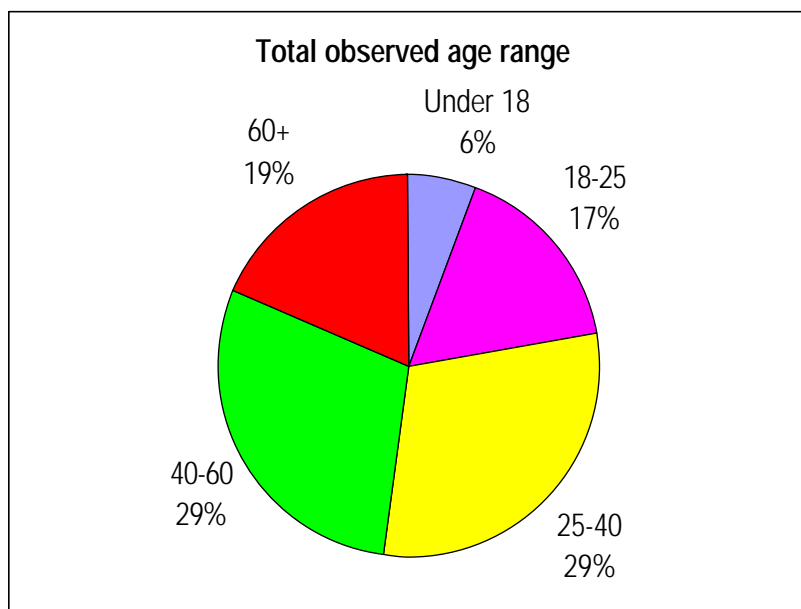
The City programme aims to enhance the outreach and inclusiveness of the Festival, particularly targeting certain groups. The presence of these groups has been evaluated at a selected range of events.

Black and minority ethnic groups

Observations have shown that an overwhelming majority of the audience at these events were white. From the selected range of events (not including the Molecules for Life exhibition where observations of the ethnic groups for the whole week were not possible) of approximately 562 attendees, 97% of those were White, 0.02% were Asian, 0.01% were Chinese, 0.005% were Black and 0.001% were Hispanic.

Families and 18 to 25 year olds

The total observed age ranges from all events attended are shown here;



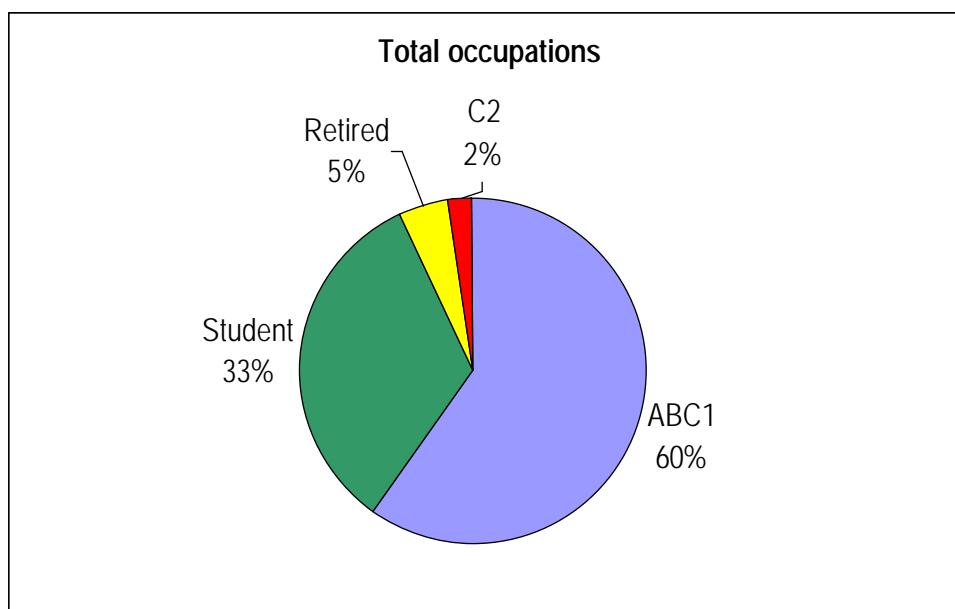
Six percent of the total attendees were under 18, suggesting that a number of family groups were present at the events, this percentage is significant considering a number of events took place in unsuitable venues for under 18s, such as nightclubs.

The 18-25 year olds represent 17% of the total attendees in the city, again a significant percentage.

Please note that these age ranges were based on observations by the evaluator and therefore differ slightly from the findings of the questionnaires completed by attendants during the booking process (p21).

Retired people, economically disadvantaged, and people of various education levels

The total of the respondents' occupations taken from all the questionnaires is shown here;



The number of people in the C2 demographic is just 2%. The majority of the total attendees were in the ABC1 demographic, or students, suggesting that the majority of the group were economically advantaged and highly educated.

This evaluation aimed to provide additional information about:

The audiences' perceptions of the event / the quality of the event

The audience perceptions and rating of the events were mostly high, the most frequent rating being excellent or good in most cases. However this was extremely dependent on the type of event.

The audiences' reasons for attending / attractiveness of the event

The most popular reasons given for attending the events were an interest in science in general or an interest in the specific subject. However again this was highly dependant on the type of event. The only events where these reasons were not given were the Particle Plays workshop where the students attended because of their links with a theatre group and the Molecules for Life exhibition where people passed by in the busy shopping centre.

How the audience heard about the event / effectiveness of advertising

The respondents had most frequently found out about the events from the main festival programme or the City programme. Again the exceptions were the Particle Plays workshop, where the students found out through their theatre group and the Molecules for Life exhibition where people found out about it as they passed by in the shopping centre.

The audiences' awareness of the BA as the organisers of the event / brand awareness

The majority of the audience were aware that the events were a part of the BA Festival, with the exception of the people interviewed at the Leviathan who were aware of the Festival, but did not know that this was a Festival event as it coincided with an event normally run regularly in Dublin.

Conclusions

The City programme was successful in that the quality of and satisfaction in events was high and a great many audience members said that they had gained something from the events. The events also managed to combine a number of different activities demonstrated by the wide range of terms the respondents used to describe the events aside from just 'science'.

The most successful events in achieving outreach were the Particle Plays workshop and the Molecules for Life exhibition.

The Particle Plays workshop was successful in engaging a group of students via another interest (in theatre) and combining this with science. Without this event this group would have been unlikely to have been aware of the Festival or attend any other events. More Festival events like this, focused at particular existing groups of people, e.g. from a retirement home, or a youth group from an economically deprived area, would increase their inclusiveness.

The Molecules for Life exhibition had a great advantage because of its position. The exhibition looked stylish and interesting particularly because of its interactive and simple nature, and attracted many people to it who had no idea about the Festival. More events like this that communicate science in an un-intimidating way, in a familiar environment, with such a high frequency of people would be a good way to engage people in science and raise awareness of the festival.

NB The full evaluation of the Science in the City programme can be downloaded from our website at www.the-ba.net/2005evaluation

Appendix 5 Science in the City community liaison and outreach

A steering committee informed and guided the Festival programmes on community outreach and event formation.

The committee aimed to fulfil its mission statement:

To bring science into Dublin city spaces and venues; to engage a broad public audience across all demographic groups and to promote dialogue and cultural contextuality of science in society during the BA Festival of Science.

The committee consisted of eight members from diverse backgrounds with a broad variety of experience in dealing with different community, and varying age groups. Committee members were:

Brian Trench

A senior lecturer and Head of School in the School of Communications at DCU. He teaches modules in Science and Media, Science and Society and Research Methods. His research interests are in online journalism and in social uses and representations of science and technology. He manages the Biosciences and Society research group within the National Institute for Cellular Biotechnology and has been a theme leader in the EU-funded ENSCOT (European Network of Science Communication Teachers) and MUDIA (Multimedia Content in the Digital Age) projects. Brian was a member of the government advisory body, Irish Council for Science Technology and Innovation, 1997-2003. He was a full-time journalist for 20 years before joining DCU.

Padraig Murphy BSc MSc

Research Associate at the BioSciences and Society (BSS) programme of the National Institute for Cellular Biotechnology (NICB). Padraig is completing a PhD at DCU on young people's assumptions about biology and genetic technologies. Padraig has a background in e-learning content management, instructional design and science communication. He holds a BSc in Environmental and Biological Pollution Science and an MSc in Science Communication. Padraig is also a member of the Steering Committee of the Citizenship and Science Exchange (CaSE) educational web portal project.

Eve Merton

A doctoral candidate at DCU. She is a biologist who became interested in the communication of science and worked as a science journal editor for several years in Australia. Eve became involved with the city committee due to her position in the Biosciences and Society research programme and a specific interest in how biotechnology researchers communicate about their work.

Eoin Geraghty

He has a background in marine biology and immunology. He has been working in science communication after completing a M.Sc. in Science Communication at DCU. He is currently the Director for Communications and Marketing at the National College of Ireland.

Mary Mulvihill

An award-winning science writer and broadcaster, she is the author of *Ingenious Ireland*, the definitive guide to Ireland's scientific and industrial heritage. She has much experience in event organisation in the area of science and culture.

Deiric Ó Broin

Chief Executive of NorDubCo - the North Dublin Development Coalition, a regional think tank established to promote the economic, social and civic development of the North Dublin region. It provides a neutral space for discussion and debate between public institutions and local development agencies to address the primary strategic issues facing North Dublin. For some years previously he was employed as an economic policy analyst in the commercial sector. From 1995-1997 he worked in the Office of Labour Affairs in the Department of Enterprise, Trade and Employment and in the Office of the Tánaiste. He is a graduate of the Dublin Institute of Technology, the National College of Industrial Relations and University College Dublin.

Philip O'Reilly

Philip has a B.Sc. in Biotechnology from DCU and has worked in industry for a number of years. After being involved in education he returned to DCU to complete a M.Sc. in Science Communication. He organises café scientifique's in Dublin and writes freelance for Science Spin and Technology Ireland. He is currently coordinator of the City programme'.

Michael John Gorman

Director of the Arkimedia project at The Ark: A Cultural Centre for Children in Dublin. He is the author of the book *Buckminster Fuller: Designing for Mobility* (Skira 2005) and various articles. He co-authored *Technica Curiosa*, a book exploring the aesthetics of Baroque technology. Michael John was a lecturer for three years in Stanford University's Program in Science, Technology and Society and has held fellowships at MIT, Harvard University and the Museum of History of Science in Florence.

The City programme forged partnerships with a number of cultural, public and community organisations to enhance outreach and inclusiveness. These include TASCQ (Traders in the Area Supporting the Cultural Quarter) in Temple Bar. TASCQ is an independent company, which represents traders in Temple Bar and includes restaurateurs, hoteliers, publicans, retailers, cultural centres and service providers who operate in Dublin's Cultural Quarter. It also established partnerships with the Royal Irish Academy, Royal College of Surgeons Ireland, Royal Dublin Society, Dublin City Enterprise Board, Dublin City Council, NorDubCo, Dublin Civic Offices, National History Museum, National Gallery Ireland, Royal Concert Hall, Chester Beatty Library and the Dublin Writers Centre, among others.

The committee met as a working group to target specific publics, create events, form partnerships and broaden audience attendances for 'City' events. It identified the following groups as marginalized and thus to be targeted.

- (1) BME.
- (2) Specific age groups: identified 3 groups, (a) 18-25 year olds, (b) families & (c) retired people
- (3) Economically disadvantaged
- (4) Publics of various education levels
- (5) Social and cultural special interest groups.

(1) Ireland is in constant demographic flux as our society becomes increasingly multicultural. The 'City' programme includes tours to the Chester Beatty Library, which will highlight historically and culturally significant scientific exhibits and MSS of Islamic and Eastern and Western origin. Many of the major public talks will also have a signer present for deaf attendees.

(2) (a) To target young adults the 'City' programme created crossover events to resonate with youth culture. Such events included movie screenings, photographic exhibits, and fusions of science and literature, science fiction, poetry, art, music and drama. The 'City' programme also brought events to bars and nightclubs and other 'youth' spaces. A science cabaret night of music, comedy and discussion is organised for a premier Dublin venue, Crowdaddy.

(b) A family day spin-off from the schools programme included a number of science shows, and workshops as well as an informal yet informative discussion on biochemistry and biology of being a teenager by Vivienne Parry.

(c) There were a number of lunchtime and afternoon walks and museum visits that appealed to retired people as well as a general audience. Partners included the Natural History Museum, the Chester Beatty Library, the Old Library at TCD, the geological museum at TCD and organised walks incorporated a history of science tours of Trinity and Dublin City Centre by Mary Mulvihill, author of *Ingenious Ireland*, *Dublin: the medieval & early modern town in the modern city* by Dr Mark Hennessey, Lecturer in Historical Geography TCD and *Sparkling façades*, a Building Stones Walk by Dr Patrick N. Wyse Jackson, Department of Geology, TCD

(3) All City programme events were socially inclusive. We kept ticket prices free or at a minimum. Some events were held in underprivileged areas and included socially disadvantaged young adults. Particle Plays was a workshop for young adults held in the Liberty Hall Arts Centre.

(4) Although upwards of 65% of Festival attendees (UK) have degrees the City programme targeted non-specialist and non-scientific publics. It achieved this by

- (a) making events accessible by placing them off the main campus
- (b) Specifying to all presenters/coordinators/facilitators that events are for a general audience.
- (c) creating culturally resonant fusion events in areas such as art, music, photography, literature, poetry and drama.
- (d) promoting 'dialogue with impact', interactivity, question & answer sessions and engagement.
- (e) creating spin-off events from the school programme for families.

(5) The City programme also targeted a number of special interest groups for science events. These included classical music listeners and musicians, electro-acoustic sonic artists (electronic music, sound sampling, DJ's), those interested in history, nature, wildlife, geology and environmental issues, artists, poets and writers as well as sci-fi buffs and those interested in drama.

The City programme was formulated to be inclusive to target audiences but also remain appealing to wider audiences in general. Many limited attendance events, walks tours were repeated during the week to allow more groups to join and to prevent conflicting timing of events by giving extra opportunities to participate.

Brian Trench

Philip O'Reilly

BA Festival of Science, 'Science in the City' Programme.

Appendix 6 Evaluation of 14 – 19 programme

1. Summary

Questionnaires were handed out to those 14-19 year olds who attended events in the 14 - 19 Programme or in the main Festival programme. Teachers who accompanied them to TCD were given a different questionnaire.

2. Feedback from students

Questionnaires were completed by teenagers in 20 different events throughout the Festival, 16 events especially for this age group and four from the main programme. 819 questionnaires were collected altogether.

2.1 Events especially for 14-19 year olds

Feedback was gained from the following sessions: BAcKchat (see Appendix 7), BioBubble, Buzz off!, Democs, Debate with a Difference, The Secret World of Codes and Code Breaking, Scientist on a Soapbox, Nutrition and Health Megabytes, Saturday Night Chemistry, Chemistry against Crime, Hollywood Science, Genes to Proteins, Gene Delivery, Living in a Changing World and The Nano Experience.

The content of 12 of the sessions was regarded as 'excellent', three as 'good' and one as 'average'. Sessions that scored highly tended to be workshops such as Debate with a Difference where the students all get involved in an activity, or lectures such as Saturday Night Chemistry that involved a lot of exciting and interactive experiments. Comments included, "*broke it down and made it easy to understand*", "*fun way to learn*" and "*bang on*". The one session that scored 'average' was considered '*Way too complicated for 4th years*', showing the importance of checking content against audience age.

The entertainment value was voted as 'excellent' or 'good' in 94% of the sessions, with the highest scoring being events such as BioBubble which are visually stimulating and different from anything the students are likely to have seen before. 56% of the presenters were voted as 'excellent' regarding their enthusiasm and these tended to be younger presenters or those that used a panel of different speakers. Comments about such presenters included "*this guy rocks!*", "*the girl was funny and easy to work with*" and "*really nice, very enthusiastic*".

Audience interactivity was the aspect of the events that scored lowest, with 31% rated as 'excellent' and 69% rated as 'good' or 'average'. Debates and workshops that involved all the students scored highest in this category.

2.2 Events in the main festival programme

Students completed questionnaires about A Year in the Life of an Athlete, Fishing for Answers, Literature and Science events and Setting the Menu for Health. The content of all four was regarded as 'good'. Comments included '*Excellent*', '*good*,

clear speakers, and *'entertaining'*. However, there were more negative remarks received than for events in the 14 - 19 programme. Examples of these are *'very confusing'*, *'talks were a bit boring'* and *'what was this about'*.

For entertainment value three out of four events were classed as 'good' and one as 'good/average'. The enthusiasm of the presenter of Setting the Menu for Health was rated as 'excellent' and the other presenters were all rated as 'good'. The level of audience interactivity was considered 'good/average' in all four events.

3. Feedback from Teachers

Eight teacher questionnaires were collected, seven from teachers from County Dublin and one from a Belfast teacher. The main reason for bringing a group of students to the Festival was 'student's enjoyment/motivation' with seven out of eight voting for this. Other reasons given were 'science syllabus' and 'enrichment'.

Teachers were asked to comment on 'ability to meet expectations', 'appropriateness to student age/ability', 'overall content and delivery' and 'level of student's enjoyment' for each of the events they attended at the Festival. All events that were part of the 14-19 programme received 'excellent' or 'good' ratings in each of these categories. Comments about these events included, *"Living in a changing world very good, suitable for age group"*. Literature and Science in the main programme received 'average', 'poor' and 'very poor' ratings. The comment *"session in main programme too long"* was made by one teacher.

Criticism was received from teachers with respect to the hands-on exhibition being closed on the Monday.

4. Recommendations

- Care must be taken when people from external organisations are running sessions for young people. The content must be appropriate for the advertised age group. The Young Peoples Programme Officer will contact potential organisers at an early stage.
- More communication with event organisers during their planning stage could encourage inclusion of audience interaction and the use of young, enthusiastic speakers.
- Events that involve students fully such as debates and workshops should be encouraged as part of the young people's programme.
- Sessions designed to increase students' enjoyment/motivation are what teachers want. The programme could be targeted with this in mind and events could be tailored to meet these requirements.
- For sessions in the main programme that want to allow young people in as well, the content should be checked to ensure it is suitable for the age group. It should be made clear to teachers that they can leave these sessions between speakers if they choose, as this could prevent them from thinking that these sessions are *'too long'*.

- Perhaps the hands-on exhibition could be open on the Monday to allow all school groups to visit.
- The maximum booking number must be clearly checked, and correlated to the age of the students who will be attending.
- Teachers should be strongly advised to go to the 14 – 19 programme information desk to receive up to date time and venue information.

Appendix 7 Evaluation of Intel BAcKchat 2005

Summary

Intel BAcKchat is the core event for 14-19 year olds at the Festival . It allows students to meet top scientists, ask them questions and explore ethical science topics through activities and debate. In 2005, five sessions took place and the subjects discussed were space, nanotechnology, mathematics, sport and health. Every day there was a different panel featuring scientists such as Jenny Patterson, Nanotechnology Program Manager for Intel and Dr Barry McSweeney, the then Chief Science Advisor to the Irish Government.

Bookings

60 places were available for each session. On Tuesday, Thursday and Friday all these seats were booked. On Monday there were 57 places booked and on Wednesday there were 55.

Profile of students

Questionnaires were completed by 167 of the students who came to Intel BAcKchat. 74 students are currently studying for their leaving certificate, 9 for their GCSEs and 57 students are in their transition year. After their current course 80 plan to do their Leaving Certificate and 76 plan to go to University. 65% plan to study scientific subjects. 69 of the students said they were not taking Higher Maths at Leaving Certificate, with 78% giving their reason as it being 'too difficult'.

Feedback from students about Intel BAcKchat

61% of the students rated the interest value of the session as 'excellent' and the majority also classed the original and informative value as 'excellent'. The entertainment aspect was rated as 'excellent' or 'good' by 90% of the attendees. Regarding the level of audience interactivity, 84% said the number of questions or comments was 'excellent' or 'good' and 89% regarded the amount of discussion as 'excellent' or 'good'. 77% of the respondents said that the session would 'possibly', 'likely' or 'definitely' influence their future subject choice.

Comments from students included, *'everyone explains everything extremely well', 'they made me more interested in science', 'very encouraging, informative and interactive', 'the talk was really eye-opening, fun and interesting', 'the speakers were excellent and passionate' and 'made me enthusiastic about the subject'.*

Comments from panellists

Panellists commented that Intel BAcKchat was *'a great way of getting teenagers talking and expressing their opinions'* and that taking part *'was a pleasure'*. Dr Barry McSweeney stated that, *"The Intel BAcKchat Session provided a forum for school students to interact with policy makers and scientists. This is something I welcome*

very much. The enthusiasm the students displayed was a tribute to them, their teachers and the Intel BAckchat staff and volunteers. I would encourage all students and teachers who have the opportunity to participate in these events to do so."

BA Festival of Science 2006

Intel BAckchat was a success in 2005, as it has been in previous years. For the BA Festival of Science 2006 in Norwich we will continue to deliver these sessions, building on our experience to design innovative, accessible activities and invite expert panellists that will help to inspire young people about science.

Appendix 8 Last year's recommendations and actions

All BA staff

1.	Arrange a site visit before the Festival begins or arrive well before first duties; both in terms of looking at venues and getting an overall 'feel' for the campus	Due to the cost of travelling to Dublin, only key members of staff from each team were able to visit the campus beforehand. Flight delays meant that some members of staff arrived later than they had expected
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Festival core team

2.	Repeat the local consultation exercise	Early articles in the Irish Times allowed people to access the proposal process. A local group was set up to advise and steer the content of the City programme
3.	Provide more, better and event labelled internal signage	Internal signage was not particularly effective. We were unable to do as much the weekend before owing to IT problems
4.	Make sure that external and AA signage is clear for first arrivals	No complaints from visitors
5.	Make sure that catering arrives with the earliest visitors	Again a few problems with catering, although the majority of events were catered perfectly. It is difficult to see how the Festival core team can influence this much
6.	Provide an additional badge printer at registration	More badge printers needed
7.	Make sure that stools and easy access telephone points are provided at registration	Working on an established registration desk meant that telephone points were available
8.	Make sure that the Festival Officer has a dedicated workspace in the Speakers' Lounge	Done
9.	Place very well-trained student assistants in the Speakers' Lounge	Speakers lounge worked well
10.	Put the event folders in the Speakers' Lounge	Done. It is important that the Festival assistants know to return them there though
11.	Investigate the speakers' experience at the Festival	Again quite a poor completion rate of questionnaires in the speakers lounge. Most information is anecdotal
12.	Allocate dedicated student assistant to the City programme	Science in the City had 8 assistants allocated to their programme
13.	Consider disabled access throughout the programme – especially on excursions	TCD were very aware of disabled access issues
14.	Employ a temporary assistant to help with mailings etc in the office during the summer	A temp was employed for a few days, but more help would have been advantageous
15.	Make sure that the City programme has a wide range of genres, a good geographic spread of events and a wide variety of disciplines	Science in the City was experimental in some of its formats, although geographical reach was not as far as it could have been
16.	Ensure smooth transfer of student assistant information to HR officer	Student assistant situation was complicated by the fact that TCD were paying them and therefore had more of an input into recruitment and scheduling
17.	Provide the University with a timetable of key dates early in the planning process	Done
18.	Adopt a targeted approach with the broadening audiences agenda	Early approaches to Barretstown Children's Hospital and the Senior Traveller Training Centre

19.	Ensure that the Chief Executive's PA handles invitations to the Honorary Degree ceremony	The honorary degree ceremony was a university event which was open to invited guests only.
20.	Consider replacing the Festival dinner with a grand reception if funding is tight	Considered but TCD were keen to have a dinner and so paid for it. This caused some problems with limited number of places available to the BA. Caused some bad feeling with long time attendees and Sections
21.	When seating people for the dinner, make sure those on allocated tables are informed well in advance	A seating plan was made jointly by the BA and TCD
22.	Try to reduce the time spent on speeches and presentations at the Festival dinner by taking photographs before or after the event	The speeches and presentations were planned and scripted to minimise the time taken

Science in society team

23.	Consider using external organisers for Working Lunches	2 working lunches were co-organised by external organisations
24.	Ensure a balance of male and female speakers on the x-change panel	Done
25.	Clarify the Working Lunches booking system	Done
26.	Send information about the x-change out in speakers' packs	Done
27.	Make sure that the PA system for the x-change is adequate and arrange technical back up	Done. Appropriate equipment had to be hired in
28.	Consider an increase in size for the x-change venue	Done, although we largely have to work with what is available. The venue this year was crowded but there were no problems with numbers
29.	Make sure that bar staff at the x-change are thoroughly briefed	Catering Manager was briefed but this did not filter through to the staff. In future SIS team to meet the staff
30.	Consider a wine reception at the Perspectives location	Done. Very successful

Publicity

31.	Maximise University attendance by having a representative of the University External Relations department on the Steering Group	Sustained campaign by e-mail, leaflets and Festival programmes around the University
32.	Cross reference the additional information in the back of the programme with the front	Done although still some complaints about the format. A fresh look at the overall programme design is to be considered
33.	Think of ways to highlight the "useful information" section in the programme	Useful information was clearer this year, but no evidence that more people read it
34.	Make sure that the City programme programme is thoroughly cross-referenced with the main programme and check all entries with organisers	By changing the timing slightly, the cross-referencing was easier although by no means perfect.
35.	Send the City programme programme to all science communication professional contacts	Done
36.	Produce fewer posters in a mixture of sizes	Posters produced and distributed by TCD
37.	Research local interest groups and send targeted publicity	Done, mainly through e-mail. Not much evidence of individual event organisers

		producing targeted publicity
38.	Promote individual events in any advertising resulting from a media partnership deal	Done through series of adverts in the Irish Times advertising individual events or types of events
39.	Factor in the cost of design and specialised formatting of the ads received from a media partnership	Mostly done in house, although more training is needed for more unusual formats (eg advertising on the side of buses)
40.	The coding of events in the Festival programme was well received and should be developed	Was developed and seemed to work well ie. less complaints

Budgets

41.	Fix a date for receipt of the university bill and clarify the charges to each party via and agreement	Slightly different this year and needed careful negotiations with the host university
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Supporter Development team

42.	Consider dedicated Supporter Development student assistants	No student assistants were requested by Supporter Development
43.	Ensure that an option to receive more information is included when booking for events in the city	Done
44.	Make sure that there is no confusion over invitations to the Student Reception	It was made clear in the programme who was invited and separate invitations were sent to student assistants
45.	Promote the Student Bursary scheme more effectively	Student bursary scheme was successful

Young People's programmes

46.	Make sure that contracts to presenters reflect the possibility that some events may not fill	The situation did not arise
47.	Allocate the task of rooming the 8-13 programme to the contractor	Done. The contractor worked in conjunction with BA staff
48.	Elicit new risk assessments from presenters each year	Some limited success with this, although this should be built into the process earlier in future so that presenters know they will have to provide one
49.	Address the issue of younger attendees in the 14-19 age group	We provided more dedicated events for the younger age group which seemed to minimise the number of them in unsuitable events

From the qualitative evaluation

50.	Publicise the Festival locally at least two months in advance and continue ('drip, drip, drip') with increasing weight as the Festival draws near	Done to a certain extent although improvements can be made. Most of the advertising was pre-Festival (buses, DART and radio)
51.	Use advertising to demonstrate the nature and character of the City programme and its elements	The Science in the City programme was more 'Festival like'
52.	Present and enjoy individual themes and individual events, in as provocative and intriguing a way as possible. And lots of pictures	Much more emphasis on individual events and themes in the Irish Times adverts and the DART adverts
53.	Deliver the City programme programme as widely as possible (door to door, place of work) plus web address	Delivered to 25000 homes in Dublin; available from Libraries, Museums and city centre venues
54.	Organise event timings to fit the lifestyle patterns of the audience	Timings included at least 3 evening events as well as weekend events and lunchtime tours
55.	Orchestrate a final blast of local media	Radio ad, Bus and DART adverts in the two

	interest just before the event, to tip the balance against last minute lethargy	weeks preceding the Festival. Irish Times printed highlights of the next day
56.	A sense of critical review gives currency	Advance editorial in the Irish Times and Science Spin focussed more on events, or event themes within the Festival
57.	Ensure there is a strong mix of wow factor, entertainment, liveliness, controversy and a role for the audience.	Big name speakers, interactive events and controversial subjects (smoking ban and immigration) all formed part of the programme
58.	Offer an accessible location which is interesting in its own right. And wherever possible, make it free entry (with ticket). Freebies such as fish and chips have a disproportionate effect	Locations included Meeting House square in the centre of Temple Bar. Some events had a free reception attached to them
59.	Make a good value, week long, 'any event' ticket available (for two)	This was considered too difficult to administer, given that some events sold out quickly
60.	Reveal the character of the City programme	We tried to ensure that images used in the city programme gave a flavour of the diversity of events
61.	Address suspicions and misconceptions	None arose. Efforts were made to ensure that there was an Irish feel to many of the events
62.	Establish a credible relationship with the local area	Lots of involvement of different types of organisations

Appendix 9 Actions for future years following feedback from staff, attendees and organisers

Points raised in evaluation and feedback	Proposed action for 2006
Clarify what weekly pass holders are entitled to attend	Make this more obvious on the booking forms, in the programme and online
Review the system for people booking into too many events	Limit the number of reserved tickets weekly pass holders can book into
Better signage for the YPP desk	Make it more visible from the main box office and have more signs
Improve the speed of dealing with people at the Box Office	Limit the number of reserved tickets weekly pass holders can book into; have more ticket printers; have dedicated staff to talk to people in the queues to see if they can be dealt with quickly
Greater clarity with regard to Organisers free passes	Ensure that organisers inform the BA of all the people who will need a free pass well in advance and be clear where it should be picked up from
Improve the links between the YP team and Festival team to ensure smoother organisation	YP team to take bookings for the teenage programme, using the Festival booking database
Provide bus and train timetables at the Box Office	Early contact with bus and train companies and/or Tourst Information Centres to obtain timetables
Buses for trips to be clearly marked	Request trip organisers do this
Print the Festival programme on recycled paper	Investigate companies who do this and look at cost implications
Location of the BA Offices in relation to the box office and other locations on campus	Try to have the offices nearer the box office
Too many events at the same time, splitting the potential audience	Have fewer parallel events; targeted marketing for individual events
Teachers would have liked to have had more welcome onto the campus and people available to greet and chaperone them	This has a staffing implication but possibilities will be investigated
Printed programme too complex and hard to navigate; the colour scheme was difficult to read in some cases	Simplify the programme and ensure that designers are aware of issues with colour
Make sure that the Honorary Degree Ceremony, receptions and Festival Dinner are available to all	Where possible keep a number of tickets to receptions and dinner for attendees
Booking system too complicated	Clarify the programme and online
Programme available late	Produce programme earlier; ensure that supporters are aware when the programme will be available; encourage

	more use of the online programme; make programme downloadable on line earlier and easier
Accommodation too expensive	Try to ensure that the University accommodation is a reasonable price; investigate cheaper options in the local area and make attendees aware of them
Some problems with IT provision over the first weekend	Ensure that the University IT department are aware of the need to have fully functioning IT systems and photocopiers in the BA offices, box offices and press centre from the Saturday before the Festival. Check what is included (eg toner cartridges for printers)
Link up the Festival booking database with the local ticket outlet	This will be considered in the context of cost and feasibility. At the least the local outlet should be able to send electronic reports to the Festival booking office
Reach out into the wider surrounding communities with targeted events	Funding to be sought to allow a more targeted and sustainable approach to the broadening audiences agenda.