



Arts Audiences and Participants Research Appendices

**A Report prepared for
Derbyshire Arts Development Group &
Derbyshire County Council**

by

**Alan Humberstone and Tim Harris
Cultural Consortium**

and

**Dr Glenn Williams
Nottingham Trent University**

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Appendix 1:

The exploratory factor analysis of perceived benefits – technical details

When conducting an exploratory factor analysis, several steps are taken:

- (1) Calculating the number of factors that can be identified;
- (2) Adjusting the factor solution that is derived, so that a clearer picture is obtained;
- (3) Deciding on which questionnaire items are most associated with specific factors.

Before deciding on the number of factors to extract, all of the respondents' answers to each of the 17 items regarding benefits of the arts are correlated with each other. For example, a person's level of agreement to "arts events are a good thing" is correlated with that same person's agreement with all of the other items, such as "many arts events are entertaining". A correlation matrix is developed, which charts out which items are most strongly (or the least strongly) related with each other.

Step 1: Deciding on the number of factors to extract

Two criteria are used when deciding on the appropriate number of factors to extract:

- A table of all of the eigenvalues (i.e. this charts the extent to which each factor explains the variability of everyone's responses regarding all of the items on the benefits of the arts)
- A graphical plot of the eigenvalues.

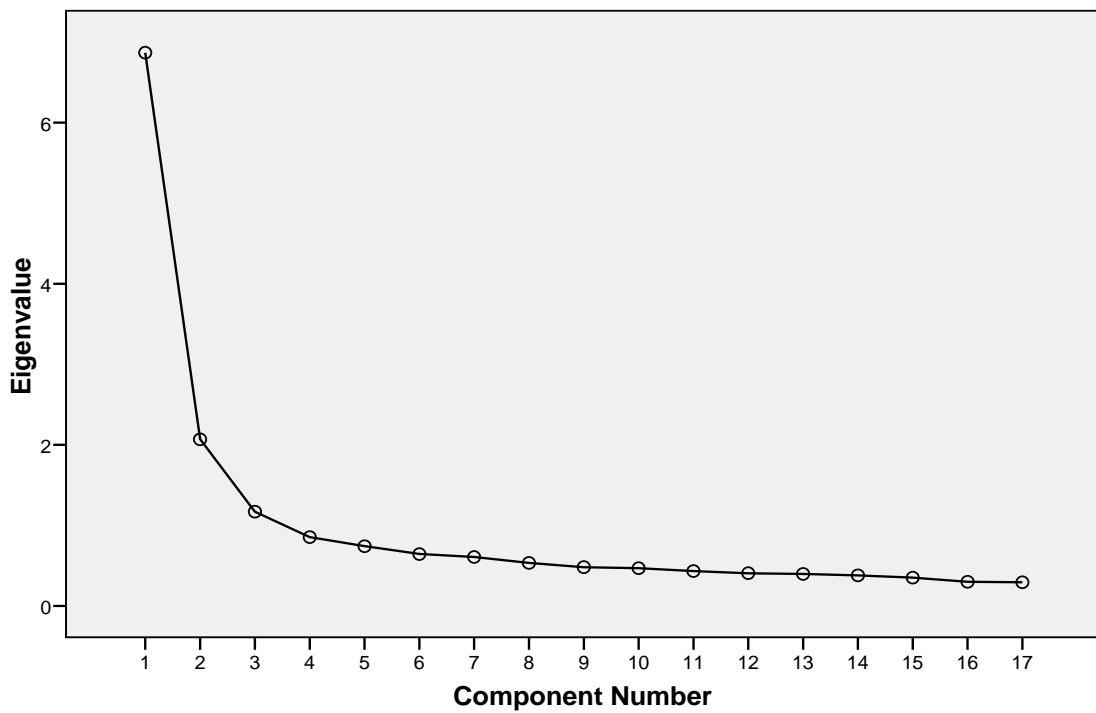
With the table of eigenvalues (Table 16), the Kaiser's criterion is often used, which means looking for an eigenvalue of 1.00 or higher; the number of factors that have eigenvalues meeting this criterion will be the ones that are eventually extracted. With the graphical plot (also known as the 'scree plot'), it is where the slope of eigenvalues seems to level out that determines how many factors to extract, although the extent of this levelling out is subject to interpretation. From Table 16, it can be seen that three factors had eigenvalues of 1.00 or higher. These three factors explained almost 60% (59.45%) of the variance in how people responded to the items concerning the benefits of arts participation.

**Table of eigenvalues for the set of 17 items
relating to benefits of arts participation**

Factor	Total	Initial Eigenvalues	
		% of Variance	Cumulative %
1	6.87	40.39	40.39
2	2.07	12.17	52.56
3	1.17	6.88	59.45
4	.85	5.02	64.47
5	.74	4.37	68.84
6	.65	3.79	72.63
7	.61	3.57	76.20
8	.53	3.14	79.34
9	.48	2.83	82.17
10	.47	2.75	84.93
11	.43	2.55	87.47
12	.41	2.39	89.86
13	.40	2.34	92.20
14	.38	2.23	94.44
15	.35	2.07	96.50
16	.30	1.77	98.27
17	.29	1.73	100.00

Scree plot of eigenvalues with factors relating to benefits of arts participation

Scree Plot



The scree plot seems to suggest a levelling out of the plot in between factors 3 and 4, which would imply that there are only 3 salient factors that can be extracted from this analysis.

Steps 2 and 3: Adjusting the factor solution and deciding on which questionnaire items are most associated with specific factors

A method known as orthogonal rotation was used on the factor solution. This process was intended as allowing for the factors to be treated as separate entities, rather than allowing there to be a substantial overlap between them. This method was preferred so that items that were largely associated with a specific concept relating to the benefits of the arts could be summed with other items connected the same concept so that a score could be developed; this score could then be used to compare between respondents according to gender, age, district of residence, etc.

The third step is one of the most important, but still open to interpretation; this involves looking at the strength of associations between each questionnaire item and seeing whether there is a pattern to these associations that can be given an appropriate label. For example, in table 17, there are items that seem to have strong relationships with the inner world of the person when engaging with arts activities (i.e. there are items that relate to arts activities as being 'entertaining', intellectually stimulating and worthy in itself, such as being labelled as 'a good thing'). By contrast, the same items are not greatly associated (using a value of 0.40 or higher as the cut-off point) with either of the other two factors.

In table 17, there is an outline of the strengths of associations (also known as 'loadings') between each item and the factors that were extracted. The labels are assigned to each factor on the basis of the content of these items.

Perceived benefits of the arts - Levels of association with three main factors

Item on benefits of the arts	Factor 1: Intrinsic benefits of the arts	Factor 2: Extrinsic benefits of the arts	Factor 3: Lack of benefits
It makes me feel good	0.81	0.20	-0.06
Arts events are a good thing	0.75	0.15	-0.22
Many arts events are entertaining	0.72	0.14	-0.26
It broadens my horizons	0.71	0.35	-0.05
Intellectual stimulation	0.71	0.25	-0.17
Productive use of my time	0.70	0.34	-0.11
I find the experience gives me a sense of wonder and awe	0.70	0.25	-0.01
When I attend arts events, it is so enjoyable that time seems to pass by more quickly	0.67	0.20	-0.19
Working as a group	0.07	0.82	-0.09
Physical health	0.11	0.78	-0.04
Gives a sense of personal identity	0.37	0.68	-0.01
It makes my community have a stronger group identity	0.27	0.67	-0.03
I like meeting new people	0.30	0.66	0.03
I like being with those with whom I have a lot in common	0.37	0.61	0.01
Many arts events are not inclusive enough	0.05	0.00	0.75
Most arts events are difficult to understand	-0.38	0.03	0.71
In general, arts events do not provide good value for money	-0.29	-0.08	0.70

Key: Numbers that are greater than, or equal to +/-0.40 explain a sizeable part of the patterns of responses in relation to factor 1, 2 or 3. These numbers are shaded, for ease of reference.

Appendix 2

The latent class analysis of reasons for not attending arts events – technical details

Latent class analysis (LCA) can be used when respondents can respond in a dichotomous manner (e.g. 'yes' or 'no') for a range of separate questionnaire items. As many individuals could use a wide range of reasons for not taking part in arts events in the past, it might be useful to identify whether or not some of these individuals can be clustered together into a group (or class) of people who use similar reasons for not taking part in the arts. LCA facilitates the identification of such groups. By assessing patterns of individual yes/no responses to 17 possible reasons for not taking part in the arts, LCA helps identify the appropriate number of groups (or classes) of people that most adequately represents the sample. If each individual responded either 'yes' or 'no' to all 17 items relating to reasons for non-participation in the arts, then there are a maximum of 131,072 possible response patterns (2^{17}).

LCA identifies similarities in response profiles and generates homogenous subgroups/classes. Each individual is then assigned a probability value of belonging to each identified class. The class with which the individual has the highest probability of belonging to is that which they are finally assigned. Using LCA to determine statistically the profile of different respondent classes (based on their reasons for not taking part in the arts) may serve as a sound basis from which to differentiate between these classes in terms of their attitudes towards the arts or their demographic profile (e.g. age, gender).

Table 18 illustrates the five most common response patterns that were found amongst 4,326 people (N.B. some respondents did not reply to any of the 17 items and their data were not included in the analysis). There were 654 response patterns that were obtained from these respondents.

Most common response patterns given for not attending arts events in the past

<u>Most frequent response patterns</u>	<u>Number of respondents endorsing this pattern</u>
'Nothing stops me from attending arts and cultural events' only	390
'No' responses to all reasons	368
'It's difficult to find the time' only	267
'Not really interested' only	216
'It's difficult to find the time' and 'it costs too much'	168

Table 19 summarises the fit statistics that were used to decide upon the best fitting solution. The key to choosing the class solution that is best supported by the data is through looking at the fit statistics and make the following decisions: detecting whether the rate of decline in the fit statistics might change direction (e.g. the Bayesian Information Criterion value in Table 19 progressively decreases from 46681.67 with the 2 class solution to 46162.61 for the 3 class solution but the value changes direction between the 6 and 7 class solutions, which seems to suggest that perhaps the 6 class solution is the better fitting one. The Lo-Mendell-Rubin Test (LRT) also declines in value

and is statistically significant up until the 7 class solution, which then becomes non-significant ($p = 0.15$), which is interpreted as the 6 class solution being markedly better than the 7 class solution. The entropy value for the 6 class solution shows that 71% of the sample (i.e. a value of 0.71 means moving decimal places two places to the right to uncover the percentage accuracy of classification) can be accurately categorised on the basis of their class membership. This value is similar to the 7 class solution but we have already uncovered with the LRT statistic that this solution is not significantly better than the 6 class solution. As a result of the profile of these fit statistics, the 6 class solution was chosen to be the most accurate representation of how people were responding to the 17 items relating to reasons for not taking part in the arts.

Fit indices for the latent class analysis of reasons for not taking part in the arts

Model	Log	Free parameters	LR χ^2 (d.f.) p	AIC	BIC	SSABIC	LRT (p)	Entropy
2 classes	-23177.58	39	3599.39 (262040) 1.00	46433.15	46681.67	46557.75	2111.90 (0.00)	0.64
3 classes	-22834.32	59	2942.01 (262023) 1.00	45786.64	46162.61	45975.13	682.44 (0.00)	0.63
4 classes	-22623.55	79	2538.01 (262005) 1.00	45405.09	45908.51	45657.48	419.04 (0.00)	0.70
5 classes	-22435.54	99	2432.92 (262003) 1.00	45069.09	45699.95	45385.37	373.20 (0.0461)	0.68
6 classes	-22283.91	119	2186.01 (261986) 1.00	44805.83	45564.14	45186.01	301.46 (0.0035)	0.71
7 classes	-22201.58	139	2045.14 (261968) 1.00	44681.17	45566.93	45125.25	164.04 (0.1456)	0.71

LR χ^2 = likelihood ratio chi-square, AIC = Akaike information criterion, BIC = Bayesian information criterion, SSABIC = sample size adjusted BIC, LRT = Lo-Mendell-Rubin test.

After deciding upon the 6 class solution as being the most accurate representation of the patterns of responses in reasons given for not taking part in the arts, the latent class analysis also enabled further identification of the likelihood that people in each class would endorse (tick 'yes') for certain survey items. Table 20 provides an overview of the percentage probability in terms of being likely to agree to a certain item as being reasons for not attending. The percentage probabilities (and the content of the survey items) were used to decide upon the appropriate label for each latent class.

Posterior probabilities estimating the likelihood of endorsing a survey item, based on latent class membership

Latent Class/Group and survey item	% probability of endorsing item
<i>Group 1: Arts resistant</i>	
Not really interested	70%
Don't really know enough about it	50%
It's difficult to find the time	45%
Never occurred to me	40%
I wouldn't enjoy it	30%
<i>Group 2: Time conscious</i>	
It's difficult to find the time	77%
<i>Group 3: Uninformed</i>	
Not enough information on what is available	93%
Not enough notice about the event	65%
<i>Group 4: Geographically and financially isolated</i>	
It costs too much	60%
Lack of transport	55%
Not close enough	40%
Don't have anyone to go with	20%
<i>Group 5: Non-motivated</i>	
Not really interested	35%
<i>Group 6: No barriers</i>	
Nothing stops me from attending	100%

Appendix 3

Results for the town or village where respondents normally attend arts events

The following list shows the complete responses to Question 14, which asked for the town or village in Derbyshire where respondents normally attend art events. There were 1305 completed replies to this question which represented 30.2% of the total responses. Many respondents listed more than one location and where this occurred, responses and up to four responses were recorded for each completed questionnaire, therefore the list is indicative of preferred town or village. Some responses listed more generic responses such as, 'anywhere in Derbyshire Dales', 'anywhere within 10 mile radius of Belper' or 'National Trust properties' and these were discounted.

Alfreton	37	Crich	2
Ambergate	5	Culthorpe	3
Ashbourne	64	Darley Dale	11
Ashby	1	Denby	2
Ashover	19	Derby	501
Ashton	1	Doe Lea	1
Bakewell	99	Dove Holes	3
Bamford	5	Doveridge	8
Barlow	7	Draycott	8
Baslow	7	Dronfield	76
Belper	121	Duckmanton	1
Blackwell	2	Duffield	9
Bolsover	52	Eckington	14
Bonsall	3	Edensor	2
Borrowash	7	Elton	1
Bradwell	5	Elvaston Castle	1
Brailsford	2	Etwall	16
Branchenfield	2	Eyam	5
Brassington	1	Findern	2
Brassington	1	Furness Vale	1
Breadsall	1	Glapwell	1
Breaston	2	Glossop	96
Brimington	1	Grassmore	1
Buxton	493	Great Longstone	1
Calke Abbey	4	Great Longstone	2
Calver	9	Gresley	1
Carsington	2	Grindleford	2
Castleton	1	Hadfield	2
Chapel en le Frith	10	Hartington	2
Chatsworth	17	Hasland	5
Chesterfield	450	Hathersage	18
Chinley	3	Hatton	2
Church Broughton	4	Hayfield	11
Church Gresley	1	Heage	2
Clay Cross	7	Heanor	41
Clifton	1	Hilton	7
Clowne	11	Holloway	4
Coal Aston	9	Holmefield	3
Codnor	1	Holymoorside	5
Creswell	9	Hope Valley	14

Horsley Woodhouse	2	Ridgeway	5
Ilkeston	78	Ripley	41
Ironville	1	Risley	1
Killmarsh	19	Rosliston	1
Kirk Ireton	1	Rowsley	1
Kirk Langley	1	Sandiacre	2
Kniveton	1	Sawley	2
Langley Mill	3	Shipley	1
Langwith	1	Shirebrook	16
Linton	2	Smalley	2
Little Eaton	6	Somercotes	2
Lock	2	South Normanton	19
Long Eaton	134	South Wingfield	1
Marlpool	1	Stauntonly Dale	1
Marston Montgomery	1	Stavely	5
Matlock	79	Stonebroom	1
Matlock Bath	3	Sudbury	3
Melbourne	28	Swadlincote	70
Mellow	1	Swanwick	2
Mickleover	1	Tansley	1
Middleton	2	Tibshelf	2
Milford	1	Ticknell	12
Morely	1	Tideswell	6
Morton	2	Tilton	1
Nether Langwith	2	Tissington	2
New Mills	33	Tupton	2
Newhall	6	Turnditch	1
Newton	5	Tutbury	2
Ockbrook	4	Unstone	1
Old Whittington	1	Walton	1
Over Haddon	1	Wangroves	2
Overseal	2	Warsop	1
Padfield	1	West Hallam	12
Pentrich	1	Whaley Bridge	7
Pilsley	4	Whitwell	11
Pinxton	6	Willington	9
Quarndon	1	Wingerworth	3
Renish	1	Winster	3
Repton	9	Wirksworth	53
Riddings	3	Youlgrave	11

Appendix 4

Focus Group Analysis

Bakewell Readers Group - number in Group 9 (8 females, 1 male)

While this group is focused on reading and discussing literature, it has a high degree of awareness of, and engagement with, all arts opportunities. In addition to books and writing, all members of the group claimed to regularly visit theatre, film, other music and festivals, while significant (over 1/3rd) also visited exhibitions, carnival, opera, classical and contemporary dance.

What they see as benefits:

The group sees major benefits in the uniqueness of the event – the live experience. Comments include:

“no substitute for the live experience”

“its always more enjoyable than TV”

“escapism”

“part of the social whirl”

“it can be a magical experience – a privilege to be there”

“it applies to visual art too – an image can stay with you for ever”

And also perceive some wellbeing impact:

“its good for mental health”

“dance is good exercise and across all ages”

“you can feel cut off from the rest of the world”

However, the group also saw significant benefits in what might be summarised as the broadening of personal horizons:

“you get to hear new things”

“understanding the culture of the world we live in, and often the worlds we don't live in”

“you understand how every country has its day, and therefore we get less arrogant”

When asked to explore what made for a bad experience, the group tended to cite the conditions in which it is seen – poor seating, rain etc.

Where they go to:

While they showed some awareness of what is available in Derbyshire, the main cultural centres that they were drawn to were Nottingham, Derby, Sheffield, and Buxton, with some, depending on the attraction, towards Manchester. There was also awareness of the range of attractions offered by small promoters in pubs and clubs (fringe theatre and music), and in rural venues through the Live and Local programme.

Nottingham is perceived to be a more attractive destination for cultural visits than Derby, because of the range of offerings, eg dance and music (classical and small-scale).

Barriers:

Despite their level of interest in the sector, the group scored the following most highly, as individuals:

- cost
- finding the time
- not enough information
- distance from where I live/work

and also cited lack of transport (although none relied on public transport), and not having a companion to go with. None cited issues of not understanding arts events, or feeling uncomfortable in arts venues.

The group finds information about what is available through local press advertising, word of mouth and e-mailings – all bar one were used to using the Web as a tool. The group do not spend time researching opportunities, apart from favoured venues that they recognise and return to. However, all also saw the benefits of having a piece of print/season brochure that can be shared with friends, and perused carefully.

Members of this group shows evidence of having the capacity to go some distance to attend events of interest and are enthusiastic. They do not always know what is available, and none were aware of the Arts Derbyshire website, They are often disappointed to find tickets unavailable for targeted events, without understanding that they may be available elsewhere within the County.

Friends of Buxton Festival (total membership, 2,800 UK wide) - number in Group: 10 (3 males, 7 females)

This group is very enthusiastic about the arts in general, and its role in developing an opera festival in particular. It has a high level of awareness of its primary art form (opera), and a general interest in other forms as individual members of the audience. Other events of interest cited among the group included art exhibitions, painting and theatre; there was a clear interest in festivals, although music festivals, similar to their own, would have been the priority. There was limited awareness of what is available elsewhere in Derbyshire, although it is drawn to similar events elsewhere in the UK (and, indeed internationally).

What they see as benefits:

When asked what benefit they as individuals derive from engaging with their activity, a mix of extrinsic and intrinsic impressions occur.

These include:

“excitement”

“emotion”

“seeing a richness of programme”

“brings a beauty into my life”

“its like a holiday”

“It’s the intimacy of the venues”

“its spiritual” – the place we are in doesn’t matter”

as well as:

“the social whirl – meeting the cast”

“the planning of the festival – it’s a second hand pleasure”
“giving children a platform and seeing them come back at events in later years”
“personal growth – I feel I’m learning”
“seeing the local community grow and get more involved”
“understanding the economic impact”
“the friendships you make”

Where they go to:

Examples cited (in addition to abroad) include Manchester, Staffs and other Derbyshire musical societies. The group felt they had limited knowledge of what was available in the south of the County.

Perceived Barriers

The group was asked to prioritise which 5 barriers (from the 18 in the questionnaire) were most appropriate to them as individuals. Those most cited were:

- Difficult to find the time (4)
- Costs too much (5)
- Not enough information on what is available (5)
- Not really interested (4)
- Not close enough (4)
- Nothing stops me (3)
- Don’t have anyone to go with (4)

The high score of “not really interested” may be taken as evidence that some of the group were primarily focused on one art form. Given the age of the individuals, it is clear that there is resistance to visiting urban settings, particularly if (as they cite it):

- a) they are without a companion to share the experience – without that, the intrinsic benefits cannot be shared or communicated
- b) transport links are difficult

Distance and cost are subjective; the individuals will pay high costs, and travel some way, if the end product is perceived to be of good value, and fitting their niche, and if group transport is arranged. Interestingly, this does not encompass what may be seen by programmers to be “popular”; this is a knowledgeable niche market.

How they get information

There was a mixed level of familiarity with the web, ranging from none to high. In general, however, the group is understandably not proactive about seeking out information. They cite mailing by post or e-bulletin and Word of Mouth as most effective, and would like to see one website that offers listings in different areas and art forms. Sky Arts and broadsheet newspaper coverage were included as one effective source of information on new opportunities, as was linking arts events to regional holiday plans.

Knowledge of Derbyshire opportunities was limited. Very few were aware of the Peak festival for example, and the *artsderbyshire* website was not known to them.

“I suppose we don’t often move out of our comfort zone!”

Ilkeston School – number in Group 12, (4 boys 8 girls)

Current involvement in the arts

The group had a number of members who were passionate about their creative activities, and very focussed, alongside a small number whose involvement outside school time was limited. The activities that the group engaged in were:

- Central TV drama group, Nottingham
- Piano student
- Play in a week events
- Youth dance
- London Fashion Week
- Summer schools

Places visited recently included:

- Commercial cinema
- Central TV studios
- Rock City, Nottingham Arena, Nottingham City band event, Running Horse pub
- Rufford Craft Centre
- Copney pub

They had seen a mixture of amateur and professional work, and were familiar with national trends and leading artistic voices in their preferred activity .

What they had got out of it

The students revealed both extrinsic and intrinsic outcomes from their participation, and would share some of the impressions of the social impact of involvement that were voiced by the adult groups. A number were also involved in Arts Awards. Comments included:

- Can be with mates
- You get more confidence – drama brings you out
- It inspires my artwork – I can use some of the things I see in my own work
- Helps you appreciate other artists
- Meet new people
- Its like a family, we've been together a lot of years

Barriers

The students saw a range of barriers, although they also believed that if an event was important enough to them, there were no barriers to attending or taking part. There were a number of barriers around gaining information about events, and with enough notice, although all were familiar with the Web, and a number on appropriate mailing lists. The other principal difficulties were around:

- Lack of time. About 1/3rd of the groups had jobs, and this, plus school work and social activities took preference. Time spent on Arts activities was regarded as enjoyment and relaxation.

- Cost. The group had paid up to £30 for a favoured band, £10 for an exhibition or £5 for a drama workshop, but above that level, the activity was not regarded as value for money.

Communication

The students regarded the principal sources of information as mailing lists, the Web and word of mouth, which reinforces the role of arts activity as part of a social network. They did also recognise information derived from posters around the school, and from TV advertising. Texting did not register.

What would you do to change things?

These students were keen to see greater involvement, and suggested:

- a) A recognisable name among their peer group extolling the virtues of involvement eg actor from Skins TV series
- b) Sensible timing of poster distribution
- c) Mixed-media events, rather than single form activities. This was seen as maximising the appeal of different sectors and developing a more vibrant and exciting event.

Wilsthorpe School, Long Eaton

Activities include Nottingham cinemas, music festivals, pantomime, and bands in local pubs. There was also some youth dance activity in the group, and interest in painting, and carnival. Artistic activity is seen by young people as being part of the social scene, encourages long-term commitment, is something where people make an effort, and achieve. To quote a participant, *"its about freedom, where you can express yourself."*

This group had less experience of taking part in creative activities, although what they had was seen as positive. A significant proportion of this group saw themselves as time-poor for creative events, (although they freely admitted to often aimless walks around the town), agreed that events may be confusing, or that they may feel uncomfortable. Part-time employment was not an issue here, partly down to age, but also due to limited prospects for additional earning locally.

For this group, different barriers emerged, connected with personal safety, and parents views of inner-city dangers, and tribal groups within their age-group. Value for money is again seen as a key barrier, and they are unlikely to visit theatres and events other than in the company of friends, although they do organise events (such as beat-boxing) within school – venue, activity, session leader, and marketing. Similarly, they source information from within their own group, rather than from print, or from websites. They also recognise a

difficulty in accessing a range of different websites, and in combating limited transport.