Out of school activities: understanding who does what

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This project, funded by the Nuffield Foundation, investigates if and how out of school activities affect primary school children’s attainment. Educational inequalities between children from different backgrounds at the end of primary school are pronounced. We are investigating how out of school activities change as children grow, and how these changes vary for children with different characteristics and circumstances, including ethnicity, social class and family income. We will then look at how these different patterns are linked with end of primary school results. Do activities help narrow the attainment gap or simply reinforce existing socio-economic differences? In this briefing paper we present results from analysis exploring how children can be grouped into distinct categories based on what they do outside lesson time in their primary school years.

- The largest group was not involved in many structured activities but spent more of their free time socialising with friends, watching TV and playing computer games. This group of children had a high proportion of children from a disadvantaged background.
- The second largest group was involved in a range of hobbies but had lower than average take-up of childcare. A large proportion of these children had a stay-at-home parent.
- The third group of children had informal childcare, such as a grandparent who picked them up from school a couple of days a week. Many of the children in this group also did organised sports activities outside school.
- The fourth group of children stood out for their weekly participation in religious activities, combined with a higher than average level of academic study. This group also had a high proportion of children from a disadvantaged background.
- The two smallest groups were distinct in terms of their use of particular types of formal childcare. In both groups other organised activities were also common. A large proportion of these children had full-time working parents.
- We show how the children in these different groups differ in terms of how they spend their time, but also in terms of their background characteristics and feelings about school.
Introduction to the study
This 15 month project is funded by the Nuffield Foundation and carried out in collaboration by NatCen Social Research, Newcastle University and ASK Research. This is the second research brief from the study which investigates how primary school children spend their time outside school hours and the implications of their activities for academic attainment and broader learning and development.

One of the first stages of the project was to map out how primary school children spend their time outside school. To do this, we have analysed data from the Millennium Cohort Study (MCS). This survey follows the lives of 19,000 children born in 2000/01, collecting information at key points in their childhood. Five sweeps of data are available so far, including three times during primary school: at the ages of 5, 7 and 11 years. The first research brief outlined children’s engagement in out of school activities at each of these time points.

Here we take a look at all three time points together and develop a typology of children based on their engagement in out of school activities. Our main focus is formal activities that are supervised and organised by adults. Examples of formal activities include after-school clubs, music lessons, sports training but also childcare, whether provided by a childminder or a grand-parent.

Typology of children’s activities
We used a technique called Latent Class Analysis to group children based on the combination of all the different activities they engaged in at age 5, 7 or 11 years. In this section we outline the differences and similarities between these groups, in terms of which formal activities they engaged in and how their time use changed during primary school.

A profile of the background characteristics of the children in each group is also presented.

Self-directed social (30%)
Children in this cluster had more unstructured social time with friends and more screen time. They were less likely to have childcare, take part in organised sports activities, other activity clubs or music, but had an average level of participation in breakfast and after-school clubs at each age point. While most did some organised activity at some point (only 6% did none at all during primary school), this group was least likely to do multiple activities. Thirty per cent of children belonged to this group.

Children in this group were somewhat more likely than average to live in an urban area (85% compared with 78% of all children) and a high proportion had a more disadvantaged home background. Almost half (49%) were living in low income households in at least two of the three time points during primary school, including 24% who were poor at ages 5, 7 and 11. The parents of almost a fifth (19%) were not working at any of the three age points and 43% of these children had mothers with no or low qualifications (below GCSEs).

This group also included a higher than average proportion of children living in single parent families at age 5 (30% compared with 20% overall) and a higher than average proportion of children with a long term disability or illness (8%, compared with 6% overall). In fact, 41% of all children with a long term disability or illness belonged to this group.

Hobbies (26%)
Children in this cluster were active physically and musically. They had the highest participation in organised sports activities at each age point. The group had an average level of participation in after-school clubs.

Over half of the children attended other activity clubs at age 7 and over a third of the group had music lessons at age 11. These children were unlikely to have any form of childcare or to take part in breakfast club. Overall, 26% of children belonged to this group, however this cluster was more common in smaller towns and in rural areas where 32% and 37% of all children, respectively, belonged to this group.

Half of the children in the ‘hobbies’ group (50%) had a parent in a managerial or professional occupation. Nearly three-quarters of these children (72%) were not poor at any of the time points, and 63% were in a stable ‘part-time working’ family (where one parent was in work and the other was not in work, or a single parent in part-time work, at every time point).

Granny and sports (19%)
The defining characteristic of this group is that the majority of children at each age point had some informal childcare during term-time. For the majority this was a grand-parent, but for some the informal childcare might be a family friend or neighbour. At each age point, the majority of the children in this cluster also engaged in some organised physical activity or sports club. Nineteen per cent of children belonged to this group overall, although it was a more common cluster in Scotland (24%) and Wales (26%).

Half of the children in the ‘granny and sports’ group (50%) had a parent in a managerial or professional occupation. About a third of this group were in a stable ‘full-time working’ family or...
a family that became ‘full-time working’ (both parents in work, at least one working full-time, or a single parent working full-time).

**Extra instruction (14%)**
This group is characterised by the majority of children at each age point taking part in regular religious activities, including religious classes such as Sunday school. A higher than average proportion of children also had extra tuition in a subject they studied at school. Overall, 14% of children belonged to this group.

This cluster was made up mainly of children from Christian (62%) and Muslim (29%) families. This is reflected also in the ethnic profile of the group. While more than half (55%) of this group were White, a large proportion of the group were of ethnic minority origin. For example, 22% of children in this group were of Pakistani or Bangladeshi origin (compared with 4% of all children) and 9% were of Black African origin (compared with 2% overall). In fact, 71% of all Pakistani, 60% of all Bangladeshi children and 66% of all Black African children belonged to this group. In Northern Ireland ‘extra instruction’ was the most common cluster, with 41% of all Northern Irish children belonging to this group.

Over a fifth of children (22%) in this group were poor at age 5, 7 and 11, compared with 12% of all children, and 31% had a mother with no or low qualifications compared with 23% overall.

**Extended school day (8%)**
At each age point, higher than average proportions of children in this cluster attended breakfast and/or after-school club. Clubs were the most common type of childcare used for children in this cluster, and compared with other clusters, a higher proportion of parents in this cluster cited childcare as a reason for using the clubs. At each age point, the majority of the children in this cluster also engaged in some formal physical activity or sports club and over a third of children in this cluster had music lessons.

Membership in this group did not differ by whether the child lived in an urban or rural setting. However, this cluster was somewhat more common in Wales where 12% of all children belonged to this group, compared with 8% of children in the UK overall.

Children in the ‘extended school day’ group generally had highly educated mothers; 58% of the children had a mother with a degree or postgraduate degree. The majority were not poor at any time point (81%), 63% had a parent who was in a professional or managerial occupation. About half (47%) were in stable ‘full-time working’ families or a family that increased the parental work to this level during the primary school years.

**Busy and highly structured (5%)**
The smallest cluster was characterised by a very high proportion of children having formal childcare, such as a childcare, nanny or au pair, but also a high level of engagement in other supervised activities. As with a number of other clusters, the majority of children at each time point were taking part in organised sports activities, half also had some other club activity, nearly half had music lessons and over a third received extra tuition at age 11. Five percent of all children belonged to this group.

About half (49%) of the ‘busy and highly structured’ group were from stable ‘full-time working’ families or a family that increased the parental work to this level during the primary school years. Most of the children (89%) did not experience poverty at any of the time points and the majority also had mothers educated to degree level or above (70%), and a parent in a professional or managerial occupation (73%).

**Small gender differences**
Overall, there was some significant variation in the gender composition of the groups, but the differences were small. The ‘self-directed social’ and the ‘extended school day’ groups had somewhat higher than average proportions of boys (54% in each group), while the ‘extra instruction’ group had a somewhat higher than average proportion of girls (53%).

**What do the children do?**

**Clubs and organised physical activities**
Children in the ‘hobbies’ group were most likely to take part in organised physical activities or sports clubs, with between 81% and 96% children at each age point having sports club or training at least weekly. Take up of sports activities was high also in the ‘busy and highly structured’, the ‘granny and sports’ and the ‘extended school day’ groups. It was lowest in the ‘self-directed social’ group, with 14% doing sports at least weekly at age 5, rising to 51% at age 11 (Figure 1).
Overall, and within each cluster, frequency of organised sports activities increased with age. However, the extent of the increase differed somewhat by cluster. At each age point, among the children who did formal physical activities, the ‘self-directed social’ group did sports least frequently, on average 1.5 days per week at age 5 rising to 2.1 days per week at age 11. At age 5, the most frequent take-up of organised sports was among children in the ‘hobbies’ group; those who took part in sports did so on average 1.8 days per week. However, by ages 7 and 11 the ‘busy and highly structured’ group took part in sports most frequently (2.2 days per week on average at age 7 and 2.8 days per week at age 11).

At age 5, after-school activity club take-up (for reasons other than childcare) was relatively low in all clusters. At 5% it was highest in the ‘hobbies’ group and slightly lower (3%-4%) in the other groups. By age 7, 17% of the ‘hobbies’ group were attending an after-school activity club at least weekly. The lowest level of take up at that age, for reasons other than childcare, was in the ‘busy and highly structured’ (8%) and the ‘extended school day’ group (7%).

At the age 7 interview, parents were also asked about other clubs or organised group-based activities that had not already been mentioned when asked about after-school club or sports training. Over half of children in the ‘hobbies’ (57%) and in the ‘busy and highly structured’ (55%) groups attended such organised activity clubs. Just under half of children in the ‘granny and sports’ (46%), the ‘extra instruction’ (47%) and the ‘extended school day’ (48%) groups also attended such clubs but uptake was noticeably lower among children in the ‘self-directed social’ group (14%).

Religion, music and academic tuition

Overall, 15% of all children attended a religious service or classes at least weekly at age 5, and 18% did so at ages 7 and 11. However, religious activity was very prevalent in the ‘extra instruction’ cluster, with 75% attending religious service or classes at least weekly at age 5, 93% at age 7 and 87% at age 11. For about half of the children in this cluster the frequency of their religious activity either increased from less than weekly to once or twice a week (12%) over the course of the primary school years, or remained stable at once or twice weekly (43%). This was most common among Christian children, 61% of whom engaged in religious activities once or twice weekly at ages 5, 7 and 11. However, 17% of children in the ‘extra instruction’ group increased the frequency of their religious activities to several times a week or maintained this at each age point (11%). Among Muslim children, 40% increased the frequency of their religious activities to several times weekly and 30% took part in religious activities this frequently through their primary school years.

Paid-for music lessons at age 11 were most common among the ‘busy and highly structured’ children, 46% of whom had music tuition. Over a third of children in the ‘extended school day’ (37%) and the ‘hobbies’ (35%) groups also had music tuition. Take up of music tuition was least common in the ‘self-directed social’ cluster, with 3% of children in this group having music lessons.

Overall, 5% of 7 year olds received extra tuition in a school subject. Extra tuition was most common in the ‘extra instruction’ group at age 7, with 9% of children receiving extra tuition, and was also somewhat more common than average in the ‘busy and highly structured’ group (7% receiving extra tuition at age 7). These two groups also stood out as the most likely to receive extra tuition at age 11, with 36% of ‘busy and highly structured’, and 31% of ‘extra instruction’ children having extra tuition at that age (compared with 23% overall).

The children in these two groups were also the most likely to take entrance exams for secondary school: 32% of children in the ‘busy and highly structured’ and 24% of children in the ‘extra instruction’ group sat entrance exams, compared with 18% of children overall.

Childcare

As the cluster name suggests, informal childcare, generally provided by the child’s grand-parent, was most common among children in the ‘granny and sports’ group. Over three-quarters of these children had some informal childcare during term-time at each age. However, a substantial minority of children in each of the other clusters also had some informal childcare during term time at each age. In fact, comparing informal childcare with the use of breakfast and after-school clubs or formal childcare, shows how much more common informal childcare was for primary school aged children (see Figure 2 on the next page for a snapshot of childcare arrangements by cluster at age 7). Use of clubs for childcare and other formal childcare (e.g. childminders) were uncommon in most clusters, the exception being in the ‘extended school day’ and the ‘busy and highly structured’ groups.

In addition to the 7% of children in the ‘extended school day’ group who attended after-school clubs for reasons other than childcare at age 7, a further 70% attended after-school club for childcare reasons. Use of clubs for childcare reasons was much lower in the other clusters.
It is not possible to distinguish in the data whether the activities at after-school clubs or homework clubs (not used for childcare) differed from activities at the childcare clubs. In other words, we cannot tell whether children who attend breakfast and after-school clubs for childcare purposes are using the same clubs and doing the same things as children who attend breakfast and after-school clubs for enrichment or other reasons. It is clear however, that the average length of time spent at after-school clubs at both age 5 and at age 7 was significantly higher if the club was used for childcare purposes. At each age point, children spent about 2 hours per day on average at after-school clubs if it was used for childcare, compared with about 1 hour and 15 minutes to 1 hour and 25 minutes on average among children who attended after-school clubs for other reasons.

Other formal childcare, generally provided by a childminder, was clearly most common among children in the ‘busy and highly structured’ group; 72% of whom used formal childcare at age 5, 95% at age 7 and 52% at age 11. This compares with an average of 6% to 7% at ages 5 and 7, down to 4% at age 11 among all children. Children in the ‘busy and highly structured’ group who used formal childcare also used childcare the most intensively; spending an average of 11 hours per week with their childminder or other formal childcare provider at age 5, 9 hours per week at age 7 and 8 hours per week at age 11.

By comparison, the children in the ‘extended school day’ group who used breakfast and after-school childcare clubs spent on average 7 hours per week at clubs for childcare reasons at ages 5 and 7. The average amount of time spent per week in informal childcare by children in the ‘granny and sports’ group was also 7 hours at ages 5 and 7, falling slightly to 6 hours per week at age 11.

**Time outside organised activities at age 11**

**Study time**

Children in the ‘self-directed social’ groups were the most likely to spend very little time on homework at age 11; 8% spent no time at all, and 14% spent less than an hour. Spending a lot of time on homework was most common in the ‘extra instruction’ and the ‘busy and highly structured’, with 35% and 32% of children in these two groups, respectively, spending three or more hours per week during term-time doing homework (Figure 3).

Over half of parents of children in all groups reported that someone at home always makes sure that the child has done their homework before having free time. This ranged from 54% among those in the ‘self-directed social’ group to 65% among those in the ‘extra instruction’ group. However, less than a quarter of parents reported that someone at home always helps the child with
homework. Always helping with homework was most common in the ‘self-directed social’ and the ‘grandy and sports’ groups (both 23%), and lowest in the ‘extended school day’ (19%) and the ‘busy and highly structured’ groups (17%).

The children most likely to spend a lot of time on homework, along with children in the ‘extended school day’ group were also most likely to read for enjoyment (rather than for school) most days: 52% of children in the ‘extra instruction’ and 51% of children in each of the ‘extended school day’ and ‘busy and highly structured’ groups. Children in the ‘self-directed social’ group were least likely (38%) to read for enjoyment most days, and most likely to never do this (11% compared with 7% overall).

**Screen time**
A high amount of screen time on school days was most prevalent in the ‘self-directed social’ group. Sixty-two per cent of children in this group reported playing games on a computer or games console every day. This compares with around half of children in the other groups (45%-53%). According to their parents, the children in the ‘self-directed social’ group were most likely to spend 3 hours or more watching TV (23% compared with 16% overall) and 2 hours or more playing computer or console games (also 23% compared with 16% overall) on a normal school day.

Children in this group were also most likely to regularly socialise online, with 28% using social networking websites most days at age 11. Children in the ‘extra instruction’ group (13%) and in the ‘busy and highly structured’ (12%) group were least likely to use social networking sites most days.

**Free play and socialising**
In addition to online socialising, children in the ‘self-directed social’ group were also most likely to socialise with their friends face to face: 36% of these children doing so most weekdays after school and 52% most weekends. Frequently spending time with friends was least common among children in the ‘extra instruction’ (20% most weekdays) and the ‘busy and highly structured’ children (19% most weekdays).

Children’s reports on how often they spend time with their friends after school or at the weekend were strongly related to their parents’ reports of how often the child had unsupervised time outside with friends at these times. The groups most likely to be supervised were the ‘extra instruction’ and the ‘busy and highly structured’ children.

- In the ‘extra instruction’ group:
  - 43% never had unsupervised time with friends on a weekday
  - 37% never had unsupervised time with friends on weekends

- In the ‘busy and highly structured’ group:
  - 37% never had unsupervised time with friends on a weekday
  - 28% never had unsupervised time with friends on weekends

Unstructured physical activity such as swimming, running or walking and active play inside or outside, but excluding clubs, lessons and the walk to school, was relatively common in all clusters. In each group, the majority of children were physically active at least once or twice a week, and overall nearly half (48%) of all children did unstructured physical activities almost daily.

However, as with organised sports, unstructured physical activity differed by cluster and the pattern was very similar for both types of physical activity. Children in the ‘self-directed social’ group and the ‘extra instruction’ were least likely to take part in either sports clubs or non-club sports, while children in the ‘hobbies’ and the ‘busy and highly structured’ groups were most likely to do each type of physical activity (Figure 4).

**Caring**
Overall, about one in ten children had caring responsibilities at the age of 11 that involved looking after elderly, sick or disabled family members at least once a week. Caring responsibilities were most common in the ‘extra instruction’ group (13% providing care at least weekly, including 5% daily or almost daily) and the ‘self-directed social’ group (12% providing care at least weekly, including 5% daily or almost daily). Caring responsibilities were least common in the ‘busy and highly structured’ group with 5% of children providing care weekly (including 1% caring daily or nearly every day).

**Feelings about school at age 11**
The next stage of our project will be to look at the association between how children spend their time outside school and academic and social and emotional outcomes. We will use regression modelling to do this but here we take a first look at
how children in the different groups differ in terms of their experiences at school and how they feel about school.

Compared with other clusters, the children in the ‘self-directed social’ group appeared less happy with different aspects of school, while the children in the ‘extra instruction’ group stood out with their generally positive outlook on school (Figure 5).

Children in the ‘self-directed social’ group were least likely to report liking school ‘a lot’ (40%), while those in the ‘busy and highly structured’ (53%) and the ‘extra instruction’ group (55%) were most likely to like school ‘a lot’.

The children in the ‘self-directed social’ group were also the most likely to feel unhappy at school most or all of the time (15% compared with 8% or 9% of children in the other clusters).

Possibly linked to their feelings about primary school, less than half of the children (47%) in the ‘self-directed social’ group said that they were looking forward to going to secondary school ‘a lot’. This compares with 60% or more in each of the other groups, again with the ‘busy and highly structured’ (62%) and the ‘extra instruction’ group (63%) being the most likely to look forward to it ‘a lot’.

Most children reported liking their teacher ‘a lot’. This was highest among children in the ‘granny and sports’ group (69%) and lowest in the ‘busy and highly structured’ (63%) group.

Children in the ‘extra instruction’ group were most likely to report liking Maths (58%) and English (46%) ‘a lot’. The group least likely to report liking English was the ‘busy and highly structured’, with 36% saying they liked it ‘a lot’. Overall, 42% of children reported liking Science ‘a lot’ and this did not differ by cluster.

Children in the ‘extra instruction’ group were the most likely to report that they try their best at school all of the time (61%), while children in the ‘busy and highly structured’ group were least likely to report this (52%).

Children in the ‘extra instruction’ group also stood out as the most likely to report that they found school interesting all of the time, although only one in five (20%) of the children reported this. In the other groups this ranged from 11% of the ‘busy and highly structured’ group to 14% of the ‘self-directed social’ group.

However, not everything about school was positive for the ‘extra instruction’ group. A substantial minority (17%) of these children thought that their class teacher was ‘getting at them’ most or all of the time. The same proportion of children in the ‘self-directed social’ group also thought this, which was higher than the 12% to 13% of children in the other groups who thought the same.

**Focus on disadvantaged children**

In this study, we are particularly interested in disadvantaged pupils and whether their access to activities equals that of their more advantaged peers and whether this has implications for their educational attainment.

The analysis reported here demonstrates a strong link between economic disadvantage and lower participation in out of school activities. Almost half of the children in the ‘self-directed social’ group were poor in at least two of the three time points during primary school (which we refer to in this section as ‘disadvantaged’). In fact, three-quarters of such disadvantaged children belonged either to the ‘self-directed social’ (55%) or the ‘extra instruction’ group (20%).

It seems possible that the different levels of engagement in formal activities between clusters is because the cost of some activities excludes poorer children. Some activities were clearly less common among poor children, including organised sports and ‘other’ clubs at age 7.

On the other hand, breakfast club attendance was slightly more common among more disadvantaged children (24%) than less deprived children (21%). It is possible that school-based clubs, and especially breakfast clubs, are either low cost or even free for some pupils. Some schools may be specifically targeting their breakfast club provision at poorer children. Alternatively, school-based activities may be preferable for some families because of difficulties in getting to and from community-based activities, perhaps if the family does not have a car or the public transport in the local area is limited.

However, for some activities, poverty was associated with take-up only in some clusters but not others, suggesting that differences in take-up may also reflect what different families value and see as useful or important activities for their primary school-aged child to do outside school. For example, take up of music lessons was low in the ‘self-directed social’ regardless of deprivation status; 3% of disadvantaged children, 4% of non-

![Figure 5 Per cent of children liking aspects of school ‘a lot’ by cluster](image)
disadvantaged children had paid-for music tuition. In other groups, family income appeared to be an important determinant of music lesson take-up. In the ‘hobbies’ group, 17% of children who had been poor at two or three time points had music lessons at age 11, compared with 38% of non-disadvantaged children.

In the MCS analysis we are limited to the questions that have been asked of parents in the survey and unfortunately, there are no questions on why the children do, or do not, take part in the different formal activities.

However, our qualitative case studies will help us explore families’ motivations and barriers to organised and informal activities for their children. While cost or access may be a factor for some, other parents and children may value self-directed free play and home time over organised activities in the primary school years.

Technical notes on the analysis

This research briefing presents findings on a typology of primary school children based on their out of school activities at ages 5, 7 and 11. To derive this typology we used an analytical technique called Latent Class Analysis (LCA). This technique divides individuals into discreet, non-overlapping, groups on the basis of their answers to survey questions (or in this case, their parents’ answers). The aim of the analysis is that the people assigned to the same group are reasonably similar to each other and people assigned to different groups are assumed to be quite dissimilar to each other, on the indicators used to define the clusters. The analysis involves comparing solutions with increasing numbers of clusters. Based on a combination of statistical goodness-of-fit indicators and less formal considerations including whether the clusters make sense substantively, the 6-cluster solution presented in this research briefing was selected.

For this analysis the children’s attendance at out of school activities at least weekly, at each age point available in the survey was included as indicators to derive the clusters. The analysis is based on 11,762 children who took part in the MCS at ages 5, 7 and 11.

- Attends breakfast club age 5, 7, 11 (including whether for childcare at age 5 & 7)
- Attends after school club age 5, 7, 11 (including whether for childcare at age 5 & 7)
- Use of formal childcare term-time weekdays age 5, 7, 11
- Use of informal childcare term-time weekdays age 5, 7, 11
- Attends ‘Other’ club at least weekly age 7
- Sport club at least weekly age 5, 7, 11
- Attends religious service at least weekly age 5, 7, 11
- Receives extra tuition age 7, 11
- Has lessons for a musical instrument age 11

More about the study

This study has multiple strands and is conducted in collaboration with co-principal investigator Professor Liz Todd and Karen Laing at Newcastle University, and with Amy Skipp at ASK Research. We have identified key theories of how out of school activities might be linked with educational attainment and are building logic models to investigate the strength of different academic theories in explaining any such associations found. The findings presented here are based on analysis by NatCen Social Research of Millennium Cohort Study (MCS) data from sweeps 3, 4 and 5, downloaded from the UK Data Service. The study also includes qualitative case studies drawing together the views and experiences of parents, children and out of school activity providers. To find out more about the study, including the theories and the qualitative case studies, visit our project webpage http://www.natcen.ac.uk/our-research/research/out-of-school-activities/. You can also let us know what you think on our message board http://www.natcen.ac.uk/blog/from-latch-key-kids-to-pushy-parents-out-of-school-activities-and-the-education-gap. For more information contact project director Dr Emily Tanner (Emily.Tanner@NatCen.ac.uk).


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